American Druggist

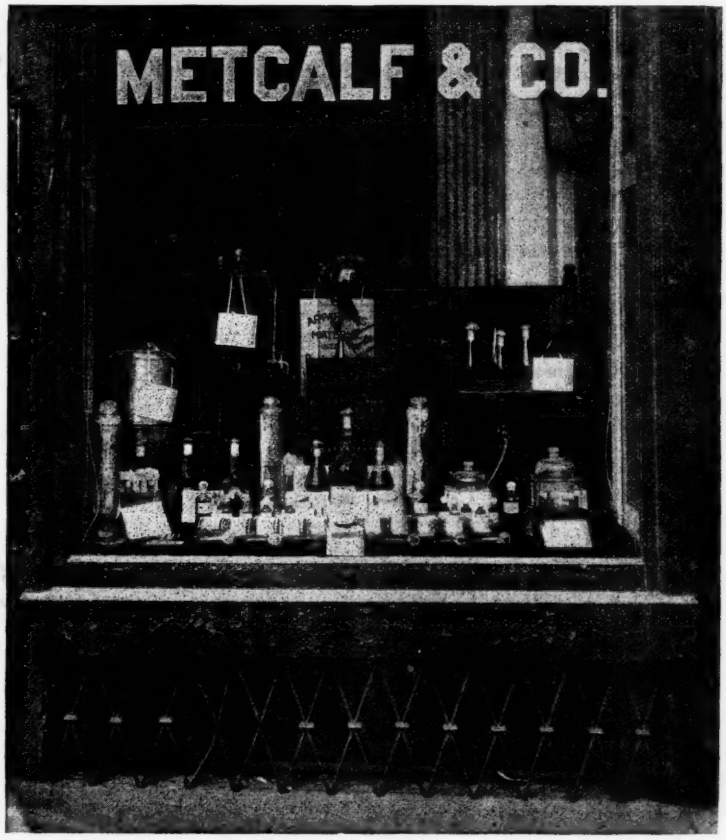
AN ILLUSTRATED TRADE JOURNAL.

VOL. XX. NO. 9. NEW YORK, MAY 1ST, 1891. WHOLE NO. 207

AN INTERESTING WINDOW.

WE illustrate herewith a form of window decoration which we have often urged upon the attention of our readers, but which is still too rarely used for their advantage.

In the latter part of January Mr. Edwin W. Shedd, who has the management of the laboratory of Theo. Metcalf & Co., of Boston, arranged a window to illustrate the methods of germ culture, with special reference to Prof. Koch's lymph for treating tuberculosis, and the result attracted general attention and secured an illustrated notice in a local newspaper of a most satisfactory character. Messrs. Metcalf & Co. have kindly complied with our request for a photograph of this interesting display and a description of its details, which we hope may stimulate others to its imitation. The pharmacist need not wait for something else of like general interest, for it will not be likely to occur again soon; but there are many things connected with his daily business which would instruct the public, and at the same time increase their respect for the knowledge and skill of the proprietor of the establishment. Take so simple a thing as a glass bottle. What a display could one make of bottles in every-day use and of those which are out of vogue! Big and little, all shapes, sizes, and colors—a window could not hold them, yet how they would shine and catch the eye of the passing customer and set him to thinking! Take any one of the pharmaceutical processes—percolation, for example, or pill-making, or plaster-spreading, and how many would stop to see a tincture made, and the many things which are accessory to it from crude drug to finished product. Take a prescription, and starting with a bit of paper with the hieroglyphic writing of some well-known local practitioner as a centrepiece, assemble about it the crude drug, commercial products, testing, pharmaceutical and dispensing apparatus, the various stages of its composition, container, label, cork, and finished article, and the money which is expected as its equivalent, and what an education it would be for the man who wonders why he has to pay so much [?] for his medicine!



Exhibition of Professor Koch's Parataloid in the window of Metcalf & Co.

To return to a description of the window in question:

In the front of the window is a row of genuine Koch syringes, consisting of a graduated glass tube with ground ends to which are attached the rubber bulb and needle; the syringe is also provided with a stopcock. This arrangement permits of the syringe being easily sterilized. Behind these is seen a line of mailing cases containing glass bulbs ready for shipment. Each package contains ten bulbs, each holding from 1 to 10 Mgm. of the tuberculin in a 1-per cent solution, and is sealed with a slip bearing the label illustrated on the following page.

In the rear of these cases, and directly in front of the

flask, may be seen a small box, which is an original package of Koch's material, and is the first package of unrestricted lymph to arrive in Boston. This package was sent to Dr. Achorn Pomeroy, from whom it was received for dilution.

Then comes a flask of nutrient agar-agar used as a culture medium for studying the development of micro-organisms; a card bearing the words, "Koch's Lymph," composed of bulbs of the diluted lymph, and in the extreme back of the window a microscope under a glass bulb.

Koch's Material
Synonym :—Paratalcid, Tuberculin.
This package consists of bulbs, each containing about C.c. of a one per cent solution, prepared from the genuine material received from Prof. Libbertz. Guaranteed genuine when bearing the signature of

On the right of the microscope, and still at the rear of the window, is seen a double-walled, sheet-iron sterilizer for sterilizing flasks, tubes, glass, plates, etc., by subjecting them to a temperature of 150° C. for about half an hour.

On the left is a brooder culture oven for keeping culture at a constant high temperature. It consists of a double-walled vessel, covered with felting, and provided with a thermo-regulator. Directly in the front of this latter piece of apparatus is an Arnold steam sterilizer, which we have found to be the best suited for sterilizing small quantities of culture media, etc., being very quickly raised to a boiling temperature.

Then in the front of the window, on the left, are flasks of nutrient gelatin, of which only the cotton plugs are visible in the photograph.

Distributed around, back of the boxes of bulbs, are bottles of the various staining and hardening fluids used in studying bacteria.

In the front of the window, on the right, is a levelling and cooling apparatus for use in making plate cultures. It consists of a triangle of wood with levelling screws, then of an outer glass dish, an inner dish filled with ice water, and then a glass plate. On this plate is placed the slide for the culture, which is covered with a glass cover. While this slide is cooling the tube of gelatin or agar is melted and inoculated, and then, the cover being removed, the contents are poured upon the slide, when they immediately solidify, the plate being made level by means of the screws. The layer of gelatin is of uniform thickness.

The tall jars contain various grades of gelatin and agar used in preparing the respective culture media.

Estimation of Nitric Acid by Reduction to Ammonia.

THE following is Prof. A. Stutzer's method, reported, in connection with a note on aluminium as a reducing agent, in the *Zeitsch. f. angew. Chem.* (1890, No. 23):

The solution, containing an amount of nitric acid equivalent to about 0.5 Gm. of nitrate of potassium [that is, about 0.33 Gm. of HNO_3], and measuring 50 C.c., is introduced into an Erlenmeyer flask, mixed with 100 C.c. of water and 20 to not exceeding 25 C.c. of solution of caustic soda of specific gravity 1.208 (about 14 per cent NaOH), and then 2 to 3 Gm. of metallic aluminium, in form of sheet, added. The mixture is allowed to stand over night and the generated ammonia distilled off next morning. Owing to the constant evolution of hydrogen, it is necessary to connect the flask, in which the reaction takes place, with the condenser immediately after the aluminium has been added, else some ammoniacal vapors may be carried over with the ammonia. Of course it will be understood that the condensing tube must be made to dip into a receiver containing a measured quantity of volumetric acid.

For practice or for checking results a standard nitrate solution is made by dissolving 10 Gm. of pure potassium nitrate in 1 liter of water.

[ORIGINAL COMMUNICATION.]

DETECTION OF METALS IN COMPLEX MIXTURES.

BY

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THERE are many drawbacks to the use of our tables for qualitative analysis among druggists. Such are the "dry process," the separation of iron by fusion with potassium nitrate, etc. The pharmacist will find the opposite table quite sufficient for his work, and requires only test tubes, an evaporating dish, and a piece of platinum foil and wire, in addition to the reagents mentioned, which are in almost every drug store. After finding the metal, refer to a solubility table and test only for those salts which are soluble in water if the substance for analysis was soluble, or for those salts insoluble in water if the substance was insoluble. Say, for example, that we find the metal to be zinc; turning to a solubility table in any of our text books, we find the following salts of zinc are soluble in water: sulphate, chloride, acetate, and nitrate; then applying the proper tests, find this salt to be a sulphate. Our conclusion then is that the substance was sulphate of zinc.

If the metal should be potassium (K), sodium (Na), lithium (Li), or ammonium (NH_4), a grouping of the acids must be followed, as most of the salts of these metals are soluble in water. Those laid down in Attfield's or Muter's chemistry will be found satisfactory.

The name for each formula is given under its corresponding number at the foot of the table. After finding a metal by this or any other table, apply tests for it to the original solution.

Spurious Cubebs.

ACCORDING to the *Chemist and Druggist*, spurious, and perhaps also exhausted, cubebs are on the market again in considerable quantity. Some time ago an Amsterdam firm actually made an offer to English houses to sell them "spurious cubebs for druggists' use." Samples of these were obtained, and were found to be very small and shrivelled, containing many stalks, and not giving the crimson reaction with sulphuric acid which is characteristic of immature cubebs. It was thought that they had been partly deprived of oil. Yet, shortly afterward, 60 bags of exactly similar berries were received directly from Singapore, and every one of these was rich in oil. Altogether 150 bags of spurious cubebs were imported into Amsterdam last year, and were sold at 3*s.* per pound. They were all exported from the east coast of Java.

The Reddening of Carbolic Acid.

E. FABRINI announces that the cause of the reddening of carbolic acid is the presence of a peculiar red coloring matter, phenerythen, which can be identified by a characteristic reaction towards sulphuric acid.

Ten or 12 C.c. of *pure* sulphuric acid are put into a test tube, and upon it is placed, with the greatest caution, a layer of carbolic acid so as not to disturb the sulphuric acid layer. The test tube is then set aside, and another one filled with the carbolic acid alone, for the purpose of easy comparison.

A Table for the detection of Metals in Complex Mixtures, being limited to Salts commonly used, or included in the Pharmacopœia of the United States of America.

First Group.—Add a drop of **HCl**, and if it produce a precipitate, add excess and *filter*.

PRECIPITATE. **Ag, Hg(ous), Pb.** Wash, boil with H_2O, filter.

FILTRATE. Add K_2CrO_4. Yellow precipitate = **Pb** (Lead).

PRECIPITATE. Wash, add NH_4HO, filter.

PRECIPITATE. Black = **Hg(ous)** (Mercurous).

FILTRATE. Add HNO_3. White precipitate = **Ag** (Silver).

2d Group.—To the filtrate add H_2S *water*, and if it produces a *discoloration*, warm, pass H_2S in excess, and *filter*.

PRECIPITATE. Wash with *boiling* H_2O, digest with 20 drops of NH_4HS, and *filter*.

PRECIPITATE. **Hg(ic), Bi, Pb, Cu, Cd.** Wash, boil with HNO_3, and add H_2SO_4 and *alcohol*.

PRECIPITATE. Black = **Hg(ic)** (Mercuric). Boil with $NH_4C_2H_3O_2$, decant, and add K_2CrO_4 to the filtrate. Yellow precipitate = **Pb** (Lead).

FILTRATE. **Bi, Cu, Cd.** Add NH_4HO and *filter*.

PRECIPITATE. **Bi** (Bismuth).

FILTRATE. Blue = **Cu** (Copper). If not blue, add NH_4HS. A yellow precipitate = **Cd** (Cadmium). If blue add **KCy** and H_2S. A yellow precipitate = **Cd**.

FILTRATE. **As, Sb, Sn.** Add **HCl**, wash the precipitate, then add $(NH_4)_2CO_3$ and *filter*.

FILTRATE. Add **HCl**. Yellow precipitate = **As** (Arsenic).

PRECIPITATE. **Sn, Sb.** Dissolve in strong **HCl**, introduce into an evaporating dish with a piece of *platinum* and a rod of *zinc* so held as to touch each other outside the liquid. A granular deposit = **Sn** (Tin). A black stain on platinum = **Sb** (Antimony).

3d group.—To a portion of the filtrate add NH_4HO, NH_4Cl, and NH_4HS. *If no precipitate, pass on to Group IV. If a precipitate*, evaporate the remainder of the filtrate to dryness and heat till organic matter is destroyed. Dissolve the residue in boiling HNO_3, then add NH_4Cl and NH_4HO. *Filter*.

PRECIPITATE. **Cr, Fe, Ce, Al, $Ca_3(PO_4)_2$.** Wash, dissolve in **HCl**, add $NH_4C_2H_3O_2$ and Na_2HPO_4 and boil.

PRECIPITATE. Wash, and boil with **KHO**.

PRECIPITATE. Dissolve in **HCL**, and to a portion add **KCyS**. A deep red color = **Fe** (Iron).

To another portion add citric acid and NH_4HO. A white precipitate = **Ce** (Cerium).

FILTRATE. Add excess of acetic acid. White precipitate = **Al** (Aluminium).

FILTRATE. Green = **Cr** (Chromium) Add $(NH_4)_2C_2O_4$. White precipitate = $Ca_3(PO_4)_2$ (Calcium phosphate).

Filtrate.—Add NH_4HS, boil and filter.

PRECIPITATE. **Ni, Co, Mn, Zn.** Wash, add dilute **HCl**, and filter.

PRECIPITATE. Black = **Ni** (Nickel).

FILTRATE. Add **NaHO** and filter.

PRECIPITATE. **Mn** (Manganese).

FILTRATE. Add acetic acid and K_4FeCy_6. A gelatinous precipitate = **Zn** (Zinc). Test for cobalt by borax lead

4th Group.—Add $(NH_4)_2CO_3$ and *filter*.

PRECIPITATE. **Ba, Sr, Ca.** Dissolve in *acetic acid* and add K_2CrO_4.

PRECIPITATE. **Ba** (Barium).

FILTRATE. Add H_2SO_4 and filter.

PRECIPITATE. **Sr** (Strontium).

FILTRATE. Add NH_4HO and $(NH_4)_2C_2O_4$. Precipitate = **Ca** (Calcium).

5th Group.—Add Na_2HPO_4 and filter.

PRECIPITATE. **Mg** (Magnesium).

Boil the original solution with **KHO**. An odor of ammonia gas = NH_4 (Ammonium).

Dip a platinum wire in the original solution and hold it in the non-luminous flame of a Bunsen burner or alcohol lamp.

A yellow flame = **Na** (Sodium).

A violet (best seen by looking through blue glass) = **K** (Potassium).

A crimson flame = **Li** (Lithium).

The following names for some of the symbols found in the table may aid the memory.

HCl—Hydrochloric acid.
K_2CrO_4—Potassium chromate (yellow).
NH_4HO—Ammonium hydrate.
H_2S—Hydrosulphuric acid, or sulphuretted hydrogen.
H_2O—Water.
NH_4HS—Ammonium sulphydrate.
HNO_3—Nitric acid.
H_2SO_4—Sulphuric acid.
$NH_4C_2H_3O_2$—Ammonium acetate.
KCy—Potassium cyanide.
$(NH_4)_2CO_3$—Ammonium carbonate.
NH_4CO—Ammonium chloride.
Na_2HPO_4—Sodium phosphate.
KHO—Potassium hydrate.
KCyS—Potassium sulphocyanate.
$(NH_4)_2C_2O_4$—Ammonium oxalate.
NaHO—Sodium hydrate.
K_4FeCy_6—Potassium ferrocyanide (yellow prussiate).

Mango and Mango Preserves.

THE mango (*Mangifera Indica*) is the best fruit in India, as highly valued as the peach with us, and forms a considerable portion of the food of large classes of the native inhabitants. The varieties cultivated are about as numerous as are those of the apple. An Indian gentleman has made colored illustrations of more than two hundred varieties of this fruit. The quality is difficult to judge of from external appearance. There are large and small, elongated and abbreviated, bright orange-colored and green. They vary much in taste, some being of the flavor of honey, some of pineapple, some of orange, while others have distinct flavors of their own. A good mango should be as little stringy as possible, and should not have too much of the turpentine flavor toward where it is attached to the foot stalk; a moderately aromatic savor there is by no means objectionable.

The young unripe fruits are largely consumed in India in tarts, etc., and mango "fool" there takes the place of gooseberry fool. The half-ripe fruits are also made into a marmalade which much resembles that of apples.

So large is the consumption of this fruit in India that wagon loads, bringing collectively 20 tons of the fruit, have entered the island of Bombay in a single day. The fruit of the finest mangoes has a rich, sweet, perfumed flavor, accompanied by a grateful acidity.

The thick juice is by the natives of India squeezed out, spread on plates, and allowed to dry in order to form the thin cakes known as *amsatta*. The green fruit is sliced and cooked in curry; is made into pickle with salt, mustard, oil, and chillis, and also into preserves and jams by being boiled and cooked in syrup. Some varieties of mango have fruits as big as an infant's head, ovate, with a golden skin, speckled with carmine, and with a greengage flavor.

The finest varieties of this almost unequalled fruit seem to thrive in Jamaica (where it was introduced about a century ago), as well as in Bombay. It is the popular fruit there with the negroes.

The Siam mango is a tolerable kind, which sometimes grows to 1 pound weight. The egg mango is a small, yellow kind, with too much of the turpentine flavor and too acidulous to be much prized. The horse mango is a very coarse fruit of unpleasant odor, much eaten by the lower classes, and producing cholera, diarrhœa, and dysentery. The Bombay mango, termed "Parsee," is known for its lusciousness and delicacy of flavor, the absence of fibre, firmness of flesh, thinness of skin, and small size of the stone. It must, however, be admitted that on tasting this delicious fruit for the first time a slight turpentine flavor is experienced.—From an article on "Indian and Other Preserves," in *J. Soc. Arts* and *Pharm. J.*

Spectacles Older than Christianity.

PERHAPS it is known to few people only that the use of spectacles can be traced back as far as two thousand years. The Emperor Nero, who was short-sighted, used concave glasses to enable him the better to watch the gladiators. Up to the thirteenth century only single glasses, such as are now known as reading glasses, were known, and the invention of the two-eyed spectacles falls somewhere about the year 1290. In an epitaph found at Florence, one Salvino degli Armati is credited with the invention, but other authorities ascribe it to the monk Alexander von Spina. In the fourteenth century spectacles were fairly common, and, as they were considered precious, were often specially mentioned in ancient testaments. Frequently a kind of beryl was used in place of glasses; hence the German name "brille." The manufacture of spectacles was at first carried on in Italy, afterwards at Middleburg, in Holland, but as early as 1482 we have spectacle makers mentioned at Nürnberg. After a while the use of spectacles became fashionable in Spain, and no doubt many a one at the present time who carries the appendage of eyeglasses does so more for appearance than actual need of assistance to the eye.

Uncle Sam Outwitted by a Chinaman.

A SCHEME has just come to light in San Francisco whereby a sharp Chinaman swindled the United States Government out of some $30,000 revenue. It is the custom there, when goods are imported, to take to the Appraisers' Store 10 per cent of them, from which the total duty is to be calculated. The Custom House broker has to file a bond of $400 for the payment of duty, and the owner is then allowed to take the other nine-tenths to his place of business. On January 1st, this year, a Chinaman went through this routine, leaving 10 per cent of a large shipment of opium with the Appraiser. Now that he is wanted to pay the duty he cannot be found. As the duty on the full amount of opium he imported will be about $35,000, and 10 per cent left by him is only worth $3,500, he makes a clear profit of over $30,000.

Plucking the Ostriches.

THE plucking at an ostrich farm is a very novel sight, and those present are well paid for their journey to witness it. The preliminary tussle, in which the bird which is to undergo the ordeal is captured, is the most exciting part of the performance. After he is caught and a sack placed over his head, he becomes as manageable as a kitten; but to catch him it takes four and sometimes five men, so great is his strength. They have twenty-nine birds at the farm, besides two Australian emus, monkeys, parrots, elk, bear, badgers, wildcats, etc. In speaking with one of the attendants your correspondent learned that they clear about $100 per bird yearly. The place is well kept and well worth a visit by tourists who visit this locality.—*Los Angeles Express*, Santa Monica Letter.

"Skunk's Ile Had Riz."

YOUR remarks on the McKinley bill, used as a pretext by retail dealers and drummers for high prices, recall to me a story told by a druggist in Hartford, Conn. He had been in the habit, year after year, of buying skunk's oil of an old countryman, for the oil of that unpleasant animal is considered by some persons a medicament of great power. During the war, as we who are old enough sadly remember, prices were literally "war prices" on almost everything. "Bill" prices they would be called now. One day the aforesaid old man from the country entered Mr. McN.'s shop.

"Fetched ye some skunk's ile!" setting down a jug on the counter.

"All right, sir; how much did you bring?"

The old man told the measure and McN. counted out the usual price.

"'Taint enough," curtly remarked the old farmer.

"Why, this is what we always pay."

"I know't. But skunk's ile has riz."

"Animals got scarce?"

"Land, no! They're thicker 'n huckleberries; but skunk's ile has riz."

"Have you been unlucky about catching them?"

"Never catched so many in all my born days, but I tell ye skunk's ile has riz!"

"But I don't see any reason for it; it should rather be lower."

"I don't care a darn if you don't. I ain't nobody's fool. Everything else has b'en a-risin', and I tell ye, once for all, skunk's ile has riz!"

The argument was conclusive.—R. T. C., in the *New York Tribune*.

Cement or Paste.—According to Winchell, a superior cement or paste may be prepared as follows:

Gum Arabic	4 parts
Starch	3 "
Sugar	1 part
Water	q. s.

Soak the gum in water, using such a quantity that it is sufficient also for the gelatinization of the starch and the solution of the sugar. [The exact quantity is not stated, being evidently left to the judgment of the person who desires to use the cement.] When the gum is thoroughly soaked or dissolved, add the starch and sugar, and heat on a water bath. The cement has the consistence of tar and retains this also when cold. It is best preserved by adding to it a little oil of sassafras.

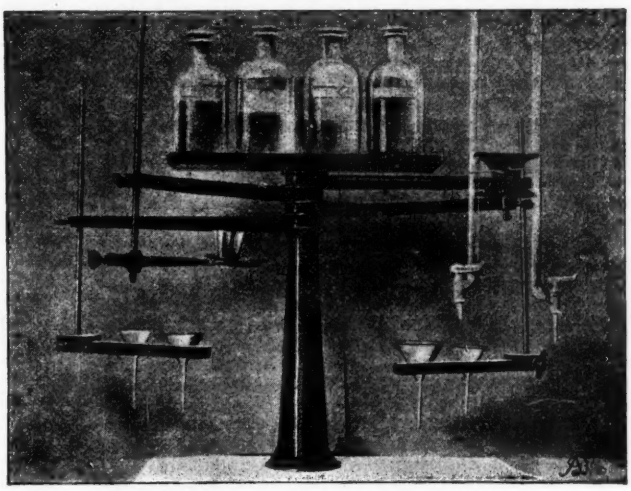
This cement may be used generally also upon objects with polished surface; likewise for cementing together broken porcelain, minerals, etc.—After *Chem. Centralbl.*

CALDWELL'S LABORATORY STAND.

THIS stand takes the place in my student laboratory of filter stands, lamp stands, and burette stands; one stand serving two students working on opposite sides of the table, and carrying also a shelf long enough to hold four bottles for the reagents most commonly used in quantitative work, such as ammonia and the acids.

It is entirely of iron, and consists of a post, with a round base about four inches in diameter and a quarter of an inch thick, from which the post proper rises to the height of about 18 inches; this post carries six arms 15 inches long, three of which can revolve towards the student working on one side of the table, while the other three revolve only in the opposite direction. Above these arms is the short reagent shelf referred to. Four of the arms (two for each side of the table) carry iron rods which can be held at any height by the thumb screws in the end of the arms. One of the arms carries a funnel holder like that in an ordinary filter stand; for the other rods the usual lamp rings are provided. Of course both rods can be used at once for filtration or for ignition by providing more funnel holders or lamp rings. The third arm carries a burette holder for two burettes.

When the table is built against the wall we have a four-arm stand (see figure), all arms turning one way. I also use, in connection with this stand, Bunsen burners on ordinary two-arm gas brackets, which, like the arms of the stand, can be drawn out toward the operator and brought under the lamp rings, or pushed back when not in use, thus dispensing with rubber tubing and risk of fire. The cost of this stand is a little less than seven dollars.—DR. G. C. CALDWELL, in *Jour. of the Amer. Chem. Soc.*



Caldwell's Laboratory Stand.

Balata.

A VERY exhaustive report on *balata* (or chicle gum) has recently been drawn up by G. S. Jenman, Government Botanist and Superintendent of the Botanic Gardens in British Guiana.

The title of the report is "Balata and the Balata Industry, Forest Laws," etc., and it commences with a very interesting description of the bullet-tree region, including its inhabitants, character of the vegetation, etc. Coming to the immediate subject of the report, Mr. Jenman describes the bullet tree, from the bark of which balata is obtained, as a large forest tree ranging from Jamaica and Trinidad to Venezuela and Guiana. He refers it to *Mimusops balata*, and says: The vernacular name appears to be applied to two species or subspecies, which are united by Grisebach in his "Flora of the British West Indies." Young plants of *Mimusops globosa* of Jamaica and Trinidad, growing in the gardens, seem to be distinct from the Guiana type. The tree grows to a height of one hundred and twenty feet, and has a large, spreading head. The trunk is nearly cylindrical. The bark is about half an inch thick, with deep parallel fissures an inch or so apart. The hard, reddish-colored wood is one of the densest in the colony, and is used for all sorts of purposes where great strength and durability are required. The tree is more plentiful in both the eastern and western parts of this colony than in the intermediate region. From the east bank of the Berbice River to the Corentyn is the region of its greatest plentifulness in the colony, but its distribution extends still eastward beyond the Corentyn into Dutch Guiana, where a grant of several hundred thousand acres has recently been acquired by an American firm for collecting balata. The trees are more plentiful in this region in the depths of the forest than near the rivers, hence the creeks form arteries to the balata grounds. Several of the creeks on both sides of the Canjo are instances of this. The woodcutters of this district regard the tree as inexhaustible; in the interior of the forest it exists in profusion and abundance, and lies beyond the reach of the balata collectors as they at present conduct their operations. As the trees near at hand become exhausted, they will no doubt alter their habits, and make clearings as drying places in the heart of the forest; but now they are under the obligation of returning to the settlements on the creeks with the milk they have collected to dry. Under this necessity they can at most only penetrate about two days' journey, but, so far as they have explored, they report there is no diminution in the abundance of the trees. The forest at this depth, of course, has never been touched by woodcutters, as, for convenience in getting their timber out, they have to confine their operations to the banks of the rivers and creeks, rarely going in more than a mile or two. Regarding the character and value of balata, Mr. Jenman says its strength is very great; and as it does not stretch under tension for special appliances, such as bands for machinery, it is unequalled. It has recently been pronounced by an American firm of manufacturers as "the best gum in the world."

Dr. Hugo Müller, F.R.S., in a report on the substance says: "It seems that balata is by no means neglected, and, in fact, it would find ready purchasers if more of it came to the market; as it is, the supply is very limited, and generally it comes only once a year. It commands a higher price than gutta-percha, and this in itself is a proof of its usefulness. It is used in almost all cases in which gutta-percha is used, but, on account of its higher price, only for superior purposes. It seems that balata is treated by the manufacturers simply as a superior kind of gutta-percha, and, therefore, its name disappears when manufactured. Nevertheless, balata is distinctly different from gutta-percha, and this is especially manifested in some of its physical characters; for instance, it is somewhat softer at ordinary temperatures, and not so rigid in the cold.

In one respect balata shows a very marked and important difference from gutta-percha, and that is its behavior under the influence of the atmosphere; while gutta-percha, when exposed to light and air, soon becomes altered on the surface and changed into a brittle, resinous substance, into which the whole of the mass is gradually converted in the course of time, balata, on the other hand, is but slowly acted upon under these circumstances. The electrical insulating quality of balata is said to be quite equal to that of gutta-percha. Mr. Jenman says that the collecting of balata is an open and recognized business, is carried on only in Berbice, but he proceeds to show that the greater part of that so collected is not obtained from trees on government grants, but surreptitiously from crown lands; and Mr. Jenman further says that much damage is done to the crown lands by the depredations of collectors, and "that it is desirable, in the interest of the colony, till effective rules are devised for the protection of the forest and the preservation of this valuable wood, that the trade should be discontinued."

The life of the balata collectors is a very hard one.

The ground they have to traverse is generally very wet and swampy. In many cases the traveller at every step is up to his knees, and this continues for miles, and water often has to be waded through up to the armpits. When the collecting ground is not too far distant, women sometimes accompany the men, and cook or assist in laying out the calabashes and collecting the milk while the men fell and ring the trees. The collectors connected with a grant sell the milk they collect to the agent on the grant, and never dry it themselves. The price for pure milk is four shillings per gallon, or occasionally a dollar, and for clean, well-dried balata one shilling per pound. Considering the circumstances of the people who follow it, balata collecting, if pursued with industry, is a paying business. The calling pays better, while the season lasts, than the best mechanical trade; with fair weather a man can earn from one to five dollars a day at it, and an exceptionally expert collector has been known to make twenty dollars in three days.

The instruments used in collecting the milk are an axe for felling the trees, a cutlass for making the channels in the bark to cause the milk to flow, and two or three gourds in which to collect the milk. The collector commences operations by chipping a piece of the bark from the selected tree, and if the milk runs well he quickly shaves the moss and rough bark from the side he intends to tap; then, stooping down with his back to the front of the tree, but on one side of it, he cuts from the base of the tree obliquely upward toward himself, in the bark, a narrow channel, then, moving round the other side, a similar one. These grooves are generally about eighteen inches long; they form an acute angle at the base, just below which a nick is cut in the bark and it is slightly lifted with the end of the cutlass, and a calabash inserted by the rim under it. Occasionally a piece of palm or maranta leaf is inserted under the bark, and the calabash is placed on the ground, the leaf conducting the milk into it. The channels are then quickly cut upward parallel to each other on the opposite sides about ten inches apart, the operator continuing them as far as he can reach, which is about eight feet from the ground. The milk trickles from cut to cut down this zigzag line into the calabash beneath. The best collectors cut the bark with much neatness and precision, and do not injure the trees; but little care is usually taken, and the wood is injured with every stroke of the cutlass, the result being that numerous trees are killed and left standing. Large trees are always tapped on the opposite sides, careful collectors leaving the intervening spaces for subsequent years. It takes from five to ten minutes to cut the channels in each tree, and the milk runs from forty to sixty minutes; at first it forms a little rivulet, but after about twenty or thirty minutes it only drips. After a little use the gourds become so coated on the inside with dry balata that they have to be occasionally soaked in water, when it peels off freely, leaving them perfectly clean again. The yield of a tree varies according to circumstances. If favorable, a tree fifteen inches to twenty inches in diameter, bled eight feet high, will yield three pints of milk. Trees are often felled, and then tapped by ringing the bark in parallel transverse lines at intervals about a foot apart.

To dry the milk, it is poured into shallow wooden trays, the insides of which are previously rubbed over with oil, soap, or grease to prevent the balata sticking, and the substance is exposed to as much air as possible, and sometimes to the sun. In fine weather it takes two or three days to dry, and in wet weather a week or more; when it is sufficiently dry to be removed from the boxes, the sheet is thrown over a line or bar to drip and become hard.

A good deal of foreign matter is found in the milk, and Mr. Jenman says adulteration is systematically carried on, and the agents have at all times to be on their guard against it.

The report concludes with a consideration of the damage done to the forests, and some remarks on their better conservation.—After *Scient. Am.*

CORRECTION.—On page 118, second column, third paragraph, fifth line, read *flesh* instead of *cuticle.*

A Great Magnesia Mine.

AIGUES-MORTES, on the Mediterranean, is known to all geologists as a remarkable instance of the slow upheaval which is constantly going on in many places. In former times it was a seaport of considerable importance, but it now stands at the head of mud flats stretching more than two miles inland. Partly in consequence of these geological changes, which have rendered the locality convenient for dealing with large quantities of sea water, Aigues-Mortes possesses at the present time features of interest to the engineer, particularly to the engineer occupied in the production of steel. Works of no great magnitude yet, but of certainly growing importance, have been constructed here for the production of magnesia. The mine from which this mineral is extracted is fairly rich and of no inconsiderable extent, being nothing less than the sea itself. With so large a property to draw upon, the company formed to operate it are free from the apprehension of exhausting their mine before a satisfactory return for the outlay has been obtained. They have, moreover, the great advantage of being able to work upon it in any part of the world where the produce may be required. These circumstances constitute features in the magnesia works of Aigues-Mortes not possessed by every mining undertaking.

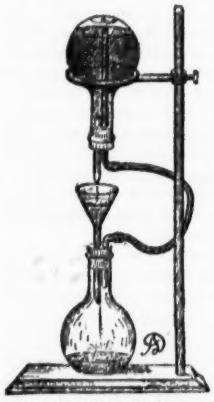
The quantity of magnesia in sea water is sufficiently great to render its extraction profitable. In a cubic meter of water there are about 2 Kgm. of pure magnesia, existing as a chloride or a sulphate. To obtain this in the form of hydrate, the cost only slightly exceeds the value of an equivalent quantity of lime required to effect the transformation, the processes being exceptionally simple. The chemical reactions relied upon to give the magnesia in the uncombined state are these: When milk of lime is poured into sea water the molecule of chloride of magnesium is broken up, chloride of lime being formed, which remains in solution, and a milky precipitate of hydrate of magnesium is thrown down. Similarly from the sulphate of magnesium we obtain the same precipitate and sulphate of calcium But the great bulk of magnesia exists in sea water as the chloride. The hydrate, when calcined, assumes two different states, according to the temperature at which the calcination has been effected. If the temperature has not exceeded 900° F., the resulting caustic magnesia is capable of resuming its water of hydration and setting hard like a cement. But if the substance has been raised to a white heat, it no longer retains that property and is indifferent to the action of water.

The magnesia extracted by these means at Aigues-Mortes is intended to be used as a substitute for dolomite, or magnesian limestone, in the Bessemer process of steel manufacture, and for this purpose it is moulded into the form of bricks.

It seems highly probable that these magnesia bricks will in a short time come into general use for this purpose, and such works as those at Aigues-Mortes will then be called into existence in many places. A new and important industry may in this way be established in this country. Equal to lime in infusibility, magnesia is a more perfect type of a refractory substance, and is applicable to every use in which it is not brought into contact with an acid substance in a state of fusion. The ease with which it may be moulded into bricks is also a practical advantage of no small value, and such bricks are greatly superior in many respects to those made of dolomite. A dolomite brick needs an anhydrous cement—usually coal-tar is employed for the purpose; it will keep unaltered only a few days, even when every precaution is taken to shield it from atmospheric influences, and it is of too frail a nature to permit of its being handled roughly. But a magnesia brick is similar to one of common clay in all these particulars. In the matter of cost, too, the advantage is on the side of the magnesia brick. Per ton, the latter costs almost exactly twice as much as the dolomite agglomerations; but as 130 pounds of the limestone are required per ton of steel produced, while 40 pounds of magnesia are sufficient for that quantity, the relative cost is as 2 to 3. This is an important merit, and the one that will commend itself most forcibly to the manufacturer of steel. It is, moreover, to be borne in

mind that when magnesia is used in the converters the duration of the linings is increased threefold. Possessed of these numerous and great advantages, magnesia bricks can hardly fail to supplant the dolomite in the use to which the latter are put in the Bessemer processes of steel-making. It is hoped that a further use of magnesia may be made by employing it as a reagent, in many cases, in place of lime. In such a case the scoriæ—phosphate of magnesia instead of phosphate of lime—would be reduced to about one-third.

At Aigues-Mortes the sea water is pumped into a large tank of masonry, and an equivalent quantity of milk of lime is run into the tank along with it. The flow, both of water and milk of lime, is continuous during the time of working, the relative quantities of each being calculated to give the requisite proportions. The mixture flows from this tank into two similar tanks in succession, and is briskly stirred in each by agitators driven by steam, or often by horse power. The precipitate, now in suspension, is to be obtained by filtration, and for this purpose the water is run upon filtering beds. These filtering beds are formed of fine, clean sea sand spread over the bottom of shallow excavations about 1,000 feet long and 16 feet broad. The magnesia is deposited upon the sand as a heavy, tenacious mud, and the supernatant liquid flows off clear at the far end of the bed. When a sufficient quantity has collected, which is known by the sand ceasing to decant properly, the inflow is stopped, and the bed, with its charge of magnesia, is left to dry up in the sun. This takes from twenty to thirty days. Of course, this method of drying can be adopted only in the summer months, and not even then in every climate. But the drying could be done artificially without adding greatly to the expense. The managers of the works at Aigues-Mortes have now under consideration a plan of this character to enable them to work all through the year. With their present arrangements they are treating 1,000 Cm. of sea water a day, and they obtain from the filtering beds an average of 2 pounds of magnesia per square yard of surface per day. The extent of the beds is being increased to treat a larger quantity of water in the coming summer season. The present output is 6 tons a week. The dried magnesia slime is stowed away in sheds, to be calcined and moulded into bricks, the manufacture of which is carried on throughout the year.—*Scient. Am. Suppl.*



Wood's Filter Washer.

APPARATUS FOR WASHING FILTERS.

THE arrangement shown in the cut is recommended by R. W. Wood (*J. Anal. Chem.*). It is intelligible without detailed description. The supply of fresh wash water is regulated by the rate of filtration. As filtrate flows into the lower flask, air is displaced from it into the upper one, and a corresponding volume of water is made to flow into the funnel.

A NEW PINCHCOCK FOR BURETTES.

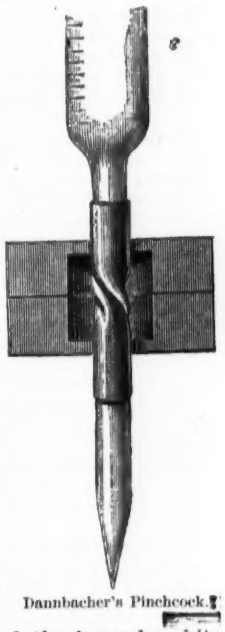
A. DANNBACHER describes a new contrivance for regulating the flow of a liquid from a burette. It may be called a pinchcock for want of a better term. Two circular pieces of wood are centrally bored, the hole being just large enough to permit the pieces being slipped over the rubber tubing connecting the burette with the nozzle. A portion of the interior of each piece is also bored out, and the surfaces of the two pieces which are to be in contact are roughened so that they will not too readily slide upon each other. The upper piece is now slipped over the tube, next the lower piece, while some traction is made on the rubber. This causes the lower piece to become pressed against the upper one and to remain in contact with it, no matter whether it is twisted or not. By twisting the lower piece the flow of the liquid may be exactly regulated, stopped, or kept at any desired rate.—*Neueste Erfind. and Erf.*

HART'S RETORT STAND.

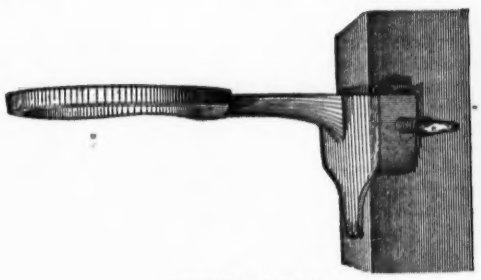
EDWARD HART, Professor of Analytical Chemistry, Lafayette College, describes a retort stand which he has for use where space is limited and the upright supports of some desk shelves are made to serve as the point of attachment. The illustration shows quite well the details of construction, and it will be noticed that a bent strip of strap iron is interposed between the point of the screw and the wooden upright to insure a firmer hold and avoid defacing the upright. When not required the support can be kept in a drawer. It can be had of Jacob Wilson, Easton, Pa., for 25 cents each, or $2.50 per dozen.—*Jour. of Analytical and Applied Chem.*

Reactions of Arsenic.

G. LOOF recommends hypophosphorous acid as the best reagent for arsenic, as described by J. Thiele. Arsenic is only precipitated from the strongly hydrochloric solution by heating. Ten C.c. of hydrochloric acid, if heated for several hours with 0.1–0.2 Gm. of calcium hypophosphite, will show the presence of arsenious oxide if 0.01 Mgm. be present. Of glycerin, sulphuric acid, phosphoric acid, 5 C.c., with 10 C.c. of concentrated hydrochloric acid, is a suitable quantity; of calcium phosphate, sodium phosphate, or tartar emetic, 0.5 Gm. in 10 C.c. of hydrochloric acid is sufficient. In the case of bismuth subnitrate, it should be previously freed from nitric acid by gentle heating, or by dissolving an equal weight of the hypophosphite with it in hydrochloric acid. Of Liquor ferri chloridi, 5 C.c. in 10 C.c. of hydrochloric acid are decolorized with Bettendorf's reagent [a strongly acid (HCl) solution of stannous chloride, containing a little sulphuric acid], and then 0.2 Gm. of the hypophosphite added. Antimony oxysulphide is dissolved by hydrochloric acid and potassium chlorate, filtered through glass wool, and heated with hypophosphite for several hours on the water bath.—*J. Chem. Soc.* from *Chem. Centralbl.*



Dannbacher's Pinchcock.



Hart's Retort Stand.

Thymol a Remedy for Filaria.—Surgeon-Major E. Lawrie reports in the *Lancet* (February 16th, page 364) the cure of two cases of chyluria dependent on filaria (threadworms) in the blood by treatment with thymol. It was administered internally in doses of 1 grain every four hours, gradually increased to 5 grains. This discovery is the more important because there has been hitherto no known remedy for the disease.—*Pharm Journ.*

Notes on Essential Oils and Allied Substances.

(From the April Report of Schimmel & Co. [Fritzsche Bros.], Leipzig.)

Anethol.—Attention is drawn to the fact that there are various "anethols" offered in the market which do not deserve this name, being at best but oil of anise subjected to fractional distillation, that is, a certain fraction of the oil. Pure anethol, however, is characterized by the following properties:

1. Its exquisitely pure and fine odor of anise.
2. Its absolute freedom from color.
3. Boiling point at 234° C.
4. Melting point between 21° and 22° C.
5. Specific gravity, 0.985 at 25° C.

The most important of these criteria is the melting point. Schimmel & Co. strongly advise buyers of anethol to insist on the above-mentioned conditions.

Oil of Bay.—This oil, as now distilled by the New York house of Schimmel & Co., is reported to be more soluble than that formerly produced. This is said to render ageing or maceration, as well as filtration, unnecessary.

According to E. M. Holmes, the tree from the leaves of which the oil is derived is not a Myrcia, but a Pimenta, and should be named *Pimenta acris*.

Oil of Birch Tar.—A new kind of crude oil of birch tar is now obtained from the Russian province ("government") of Mink. It possesses the peculiar aroma of "Russia leather" in a much greater degree than that heretofore obtained from Poland. It is also put on the market in a rectified form, but does not then possess so strong and lasting an odor as the crude.

Oil of Cassia.—Schimmel & Co. urge all importers and dealers in this article to join them in their efforts to bring about an amelioration in the quality of the oil by refusing to purchase any which is deficient in aldehyde and contains an excess of resinified products. The firm offers to test, free of charge, any samples of the oil that may be sent to them.

Oil of Bergamot.—Pure oil of bergamot is stated to be a scarce article. At present the principal adulterant is said to be oil of lemon, of which a special kind is made for this purpose, being pressed by machine. Schimmel & Co. furnish valuable data for distinguishing the pure oil from mixtures of it with oil of sweet orange or oil of lemon.

The most reliable criteria are the specific gravity, the rotatory power, and the solubility in alcohol. It is even possible, by a careful determination of the two former, to ascertain, quite closely, in what proportion the several oils have been mixed.

Pure Oil of Bergamot:
Spec. grav.: 0.881 to 0.885 [once also 0.892, but this was obtained from over-ripe fruit, such as is never used for making the oil in Italy].
Rotation (100 Mm. tube): + 8° 30′ to + 19° 30′

Pure Oil of Sweet Orange:
Spec. grav.: 0.849 to 0.855.
Rotation (100 Mm.): + 97° 4′ to + 97° 32′

Pure Oil of Lemon:
Spec. grav.: 0.857 to 0.863.
Rotation (100 Mm.): + 40° 10′ to + 62°.

Addition of oil of orange, therefore, will depress the specific gravity of oil of bergamot, and at the same time increase its rotation. Moreover, it will lose its solubility in a small quantity of alcohol of 90 per cent.

Less notable are the physical changes of oil of bergamot when it is sophisticated with oil of lemon. Nevertheless, even in this case, the same alterations in specific gravity and rotation are noticeable, though in a minor degree. The solubility in alcohol is likewise diminished.

Admixture of oil of turpentine is less common. It is usually recognized by the odor and by a lower specific gravity.

Addition of fatty oils is recognized by an increased specific gravity, and by the residue which is left behind on evaporating the oil at 100° C. Even pure oil, however, leaves a residue. On evaporating about 2 Gm. of the pure oil upon a watch glass at 100° C. until the odor has completely disappeared, there remains a green, homogeneous residue of the consistence of ointment, which amounts to about 6 per cent in a good oil. In *fresh* oil, which has not been completely clarified by standing, the percentage is sometimes a little higher. If any fatty oil is present, however, the amount of residue is larger and has a different consistence. At the bottom there will be a green, thick, greasy mass, and over it an oily, yellow liquid.

Upon the basis of what has been stated, the following conditions should be fulfilled by a good oil:

Specific gravity not below 0.880. Rotation, in a 100 Mm. tube, not over + 20°. The oil should be soluble to a clear liquid in ½ part of alcohol of 90 per cent, and this solution should not become cloudy upon addition of more of the same alcohol. On evaporation, the oil should not leave more than 6 per cent of residue, which should be a green, homogeneous mass. The oil should not contain any pinen [boils at 160° C.].

Schimmel & Co. regard these conditions as very mild, and believe that they can eventually be made much more rigorous.

Oil of Eucalyptus oleosa.—This oil, now obtainable in considerable quantities, is extraordinarily rich in eucalyptol, and, when exposed to cold, congeals to a pulpy mass. Moreover, this oil is free from the constituent which (in the common oil of eucalyptus) excites cough, and hence is more suitable for spraying in sick-rooms. It also contains much cumin aldehyde, which is already noticeable from the odor.

Oil of Fennel.—The greatly fluctuating value of this article is due to the varying amount of anethol present or left in it. It is customary to separate this constituent more or less, for the purpose of mixing it with oil of anise.

Oil of Geranium (so-called).—This oil, derived from *Andropogon Schoenanthus*, is now available from various countries besides India. The finest quality, according to Schimmel & Co., is now furnished by the island of Réunion. Oil of geranium is remarkable for its property of being completely soluble, even in dilute alcohol. The following test is, therefore, suggested by Schimmel & Co., which would show the presence of any fatty oil:

"Oil of geranium should be soluble in from 2 to 3 volumes of alcohol of 70 per cent, at a temperature of 20° C."

If much fatty oil is present, the mixture will have a milky appearance; if only a little is present, it will only be turbid and gradually deposit a smeary coat on the walls of the vessel.

Oil of Linaloe.—According to recent information, oil of linaloe is exclusively prepared by the Indians in the province of Guerrero, about one hundred leagues from the City of Mexico. It is brought to market only in small quantities, up to 1 arroba (or about 13 quarts). In recent times the Indians had given up the distillation of the oil on account of the unprofitable price. But owing to the increased demand, particularly from France, where this oil, in combination with oil of cananga, is used largely in a favorite toilet soap, the distillation has been undertaken again.

Oil of Bitter Almonds.—It has been generally held that the artificial oil of bitter almonds—that is, the synthetic benzaldehyde, such as it appeared in commerce—was always contaminated with chlorine, derived from the benzoyl chloride from which it is prepared. And upon the presence of chlorine was based the conclusion that any oil containing it was not pure natural oil of almonds.

Recently the firm of E. Merck, of Darmstadt, denies the correctness of this conclusion, and asserts that genuine oil may likewise contain, at least occasionally, some chlorinated compounds (see this journal, March 16th, page 85).

Schimmel & Co. take exception to this. They say that they have never met with any chlorine in the many tons of oil of bitter almonds which they have distilled during the last fifteen years. But, in order to investigate the subject more thoroughly, they procured from E. Merck a quantity of natural oil stated to contain chlorine. This oil was quoted on Merck's price list as Ol. Amygdalarum amar. *verum*, containing chlorine and free from hydrocyanic acid.

It will be interesting, in view of the scientific and practical importance of the subject, to give the results obtained by Schimmel & Co. more in detail. We translate from their report:

The chlorine compounds in oil of bitter almonds may be of different nature. They are either *organic* compounds, such as benzyl chloride, mono- and di-chloro-substitution products of benzaldehyde and benzylic alcohol, etc. Or there may be present faint traces of *inorganic* chlorides, such as chloride of sodium or chloride of calcium, which may have been introduced in dehydrating the oil. Naturally, the latter (which cannot be detected by Schimmel & Co.'s test) do not influence the quality of the oil, while, on the other hand, even very small quantities of the organic chlorine compounds—which possess a penetrating, repulsive odor and a most disagreeable taste—render the oil unsuitable for perfumery or for compounding cordials.

For this reason, the search after chlorine compounds may be restricted to those of an organic nature, and these can be easily detected by the "combustion method." If this is deemed insufficient, they may be detected in the following manner:

Oxidize a small quantity of the oil with a warm alkaline solution of potassium permanganate, destroy the excess of the latter by adding alcohol in drops, filter, and acidulate the filtrate with dilute sulphuric acid. When the mixture is completely cold, the separated benzoic acid (containing all the chlorine compounds, with the exception of any benzylchloride, in form of one of the chlorobenzoic acids) is caught on a filter and carefully washed. (If the filtrate contains rather notable amounts of chlorine, this points to the presence of organic chlorides in the original oil.) Dissolve the benzoic acid in pure caustic potassa, add a little potassium nitrate, evaporate to dryness, and ignite in a platinum capsule. Treat the residue with water, acidulate the solution with nitric acid, filter, and test the filtrate for chlorine by means of silver nitrate.

The presence of *organic* chlorides may be shown as follows:

Heat 5 to 10 Gm. of the oil to boiling in a small flask, and receive the first 10 or 12 drops of the distillate in a 5-per-cent alcoholic solution of potassa. Heat this for some time under an upright condenser, evaporate off the alcohol, mix the residue with water, and by shaking with ether remove the oily constituents (benzyl alcohol, etc.). Warm the aqueous liquid for a short time in a capsule, acidulate it strongly with nitric acid, allow to become cold, filter off the separated benzoic acid, and test the filtrate for chlorine.

These same methods may also be used, slightly modified, for the approximate, quantitative determination of these chlorine compounds.

Schimmel & Co. subjected the oil obtained from Merck to these tests, and found it to respond to them, whence they conclude that it contained not only organic chlorides, but also the above-mentioned chlorinated substitution products. This is taken as a proof that the oil contained artificial benzaldehyde (from toluol), since no one would dare to assert that such chlorine compounds are generated during the distillation of almonds.

A quantitative determination of the chlorine in Merck's oil gave results which led Schimmel & Co. to conclude that this particular oil consisted entirely, or almost entirely, of ordinary benzaldehyde.

Eugenol.—A crude eugenol containing about 95 per cent of the pure substance (which is the solid constituent of oil of cloves) is being obtained as a by-product in the manufacture of safrol (from crude Japanese oil of camphor). Several thousand kilos of this are at present available, and are sold at only 4 marks per kilo.

Oil of Rose.—Schimmel & Co. state that they will hereafter put on the market oil of rose deprived of its inodorous stearopten. It will, therefore, remain liquid, even when exposed to cold, and will be more readily soluble in alcohol. It would be well if other dealers in essential oils were to follow this example.

Oil of Sandalwood.—There are now four "oils of sandalwood" in the market, though this is not in every case derived from true sandalwood. The commercial names and some of the distinguishing characteristics are as follows:

	Specific Grav.	Rotation.
East Indian	0.978	−17° 20′
Macassar	0.976	−18° 40′
West Australian	0.953	+ 5° 20′
West Indian	0.956	+26° 10′

Oil of Star Anise.—This oil is usually received free from adulteration. An important criterion is its congealing point, which is at about 13° C.

In determining the freezing point it must be remembered that this oil, like the oils of anise or fennel, is very prone to remain liquid for some distance below the true freezing point. This may be avoided by adding a few ready-formed crystals to the oil near the point at which it ought to congeal. Proceed as follows:

Cool the oil by immersion of the containing vessel into water at a temperature of 12° to 14° C.; add to it, by means of a glass rod, a minute piece of a sample of the oil previously crystallized. The whole mass must now become a crystalline magma, which should not become liquid under 15° C.

In using this test upon an original can of the oil, it is necessary to make sure that the whole contents of the can are liquid before a sample is removed.

Oil of Wintergreen.—A new method of treating rheumatism by this agent has recently been introduced. A mixture of oil of wintergreen and olive oil is made, the affected joints rubbed with it and then wrapped with cotton. The pains are said to disappear in four to six hours. This method has been reported to be especially efficacious in chronic rheumatism.

Citral.—This constituent of oil of lemon, which has been found by Schimmel & Co. also in seven other oils (among them the oil of a species of eucalyptus), is now a regular article of manufacture. Oil of lemon contains only 7.5 per cent of it. Hence 75 Gm. of citral are sufficient to take the place of 1 kilo of oil of lemon.

It has been found that the most rational way of using citral is to combine it with oil of lemon. The following is suggested: Dissolve 1 part of citral in 14 parts of oil of lemon. To make lemon syrup, take 10 to 15 Gm. of this mixture, previously dissolved in a little alcohol, for every 100 kilos of syrup. The resulting syrup will be entirely clear and have a fine aroma.

Heliotropin.—The odor of this very useful perfume is stated to be brought out to perfection by the judicious admixture of cumarin.

Iron Quinine Chloride.

ATTENTION is called by Dr. J. Kersch to "iron quinine chloride" as a preparation deserving of more attention than it has hitherto received (*Pharm. Post*, March 1st, p. 172).

The preparation is described as being made by adding an equivalent weight of pure quinine to a solution containing an equivalent weight of ferric chloride, in which it should dissolve perfectly without any reduction taking place, forming a dark red solution.

This thickens, upon standing for a time in a warm place, to a paste, which, when dried at a moderate temperature, sheltered from light, forms a hard, dark brown mass presenting a resinous fracture.

This iron quinine chloride is amorphous, and can be easily powdered, but, as it readily absorbs moisture, it should be kept in well-closed vessels.

It dissolves freely in water and alcohol, somewhat less freely in ether, and has a bitter, astringent taste. Dr. Kersch states that, applied externally, the compound has hæmostatic properties similar to ferric chloride, but that even in concentrated solution and applied to fresh wounds it is without causticity and perfectly painless in its action.

Administered internally, Dr. Kersch says he has found a 10-per-cent solution very useful in cases of profuse hæmorrhage post abortum, in doses of 10 drops every one or two hours, given in water or on sugar enclosed in a wafer; also in profuse menstruation, in 10-drop doses five or six times a day, and in pulmonary hæmorrhage.—*Pharm. Journ.*

Method of Estimating Nitric Acid by its Conversion into Ammonia.

THERE are various methods known by which nitric acid may be reduced to ammonia, and some of them have been at different times proposed and used for analytical purposes. Recently, however, a new one was proposed by Karl Ulsch which is so simple and easily executed that it will probably supersede any other. In fact, it is easily executed even by those who are not very expert with analytical methods involving considerable skill and experience.

The author found that by heating the solution of a nitrate with dilute sulphuric acid and very finely divided iron (reduced by hydrogen), the nitric acid is very rapidly and completely reduced to ammonia.

In executing this reaction the amount of nitric acid to be converted in one operation should not exceed that which is equivalent to 0.5 Gm. of potassium nitrate.

[If nitric acid is present in the free state, it is neutralized with potassa. Every reagent and solvent entering into the reaction must be free from ammonia. It is best to make a blank experiment, leaving out the iron, to ascertain the amount of ammonia contaminating the ingredients, if any has been found present.—ED. AM. DRUGG.]

Into a half-liter flask are put 25 C.c. of the nitrate solution (containing not over 0.5 Gm. of potassium nitrate or its equivalent in nitric acid), next 10 C.c. of dilute sulphuric acid (spec. grav. 1.350), and lastly 5 Gm. of commercial "reduced iron." In order to avoid loss it is advisable to insert into the mouth of the flask a pear-shaped glass vessel. [We suggest a test tube large enough *nearly* to fill the neck. If desired, this may be closed with a rubber stopper carrying a long and a short glass tube, the former of which is connected with the water supply. A current of cold water may thus be made to pass through the tube, which will effectually prevent loss of volatilized products.—ED. AMER. DRUGG.] By cautiously warming the flask with a very small flame, a brisk but not violent evolution of gas is maintained. In proportion as the reaction diminishes the heat is increased, so that the liquid will begin to boil in about four minutes after the beginning of the reaction, the amount of gas given out being kept as near uniform as possible. When no more gas is given off and the liquid has been kept boiling for half a minute or so longer, the reduction is completed. It thus requires only about five minutes' time.

The contents of the flask are now diluted with 50 C c. of water, then supersaturated with 25 C.c. of ammonia-free soda solution (spec. grav. 1.250), and the ammonia then distilled over [into volumetric acid]. As the liquid is small in quantity, only about six or seven minutes are required to distil it over under brisk boiling.

This method permits the estimation of nitric acid from the first to the last step in fifteen to twenty minutes, if all the apparatus and materials are ready.

The author points out that the quantities and proportions of materials to be used in each determination should be those directed above, as the given proportions have been found to yield the best results.

Analytical data added by the author show that the obtained results are exceedingly accurate.—*Chem. Centralbl.*, 1890, 926.

Hypnal.

ATTENTION is called by M. Demonde to the ease with which pharmacists can prepare their own supplies of monochloralantipyrin, or "hypnal" (*Répertoire*, March 10th, p. 107).

If a solution of 47 Gm of chloral hydrate in 50 C.c. of distilled water be mixed with a solution of 53 Gm. of antipyrin in 50 C.c. of water, and poured into a separating funnel, an oily-looking liquid is formed in the lower part, which, after standing an hour, is drawn off from the aqueous supernatant liquid. At the end of twenty-four hours the oily liquid will be converted almost entirely into a mass of transparent rhombic crystals, and some small crystals will have formed in the aqueous liquid.

These should be drained and dried between folds of filter paper or under a glass with sulphuric acid.—*Pharm. Jour.*

American Druggist

AN ILLUSTRATED BI-WEEKLY JOURNAL.

VOL. XX., No. 9. WHOLE No. 207.

WILLIAM WOOD & COMPANY,
PUBLISHERS,
56 & 58 LA FAYETTE PLACE,
NEW YORK, N. Y.

SUBSCRIPTION PRICE per year, - - - - - - $1.50
SINGLE COPIES, - - - - - - - - - .10

Address all communications relating to the AMERICAN DRUGGIST *to* WILLIAM WOOD & Co., *56 and 58 La Fayette Place, New York City, to whose order all postal money orders and checks should be made payable.*

The AMERICAN DRUGGIST *is issued on the 1st and 15th of each month. Changes of advertisements should be received before the 5th and 20th. New advertisements can occasionally be inserted after the 10th and 25th.*

EDITORIAL.

WE have the pleasure of presenting in extra pages of this issue a telegraphic report of the meeting of the American Pharmaceutical Association in New Orleans. The prediction, in our issue of April 15th, of an unusually interesting meeting seems to have been fully justified in every particular, and the only ones who have any fault to find are the ones who did not *get there*.

IT is to be regretted that the cool way with which some of our pharmaceutical exchanges lecture the retail drug trade on their error of judgment in making so much disturbance about the cut-rate troubles, cannot be put to some available use in cooling soda fountains or tempering the heat of summer when ice is scarce. At the outset of the trouble it was the advice, encouragement, and assistance of these very journals which induced retail druggists to assemble, declaim, and resolve, and it is not creditable to their wisdom—now that the bottom has dropped out of the movement, when it is discovered that the plans which they advocated are declared to be illegal, and when the result of the agitation has been only to the advantage of the cutter—that they should calmly say to their readers: "You ought to have known better!" After two disastrous attempts at imitating Mrs. Partington's experience in checking the rise of the ocean tide with a broom, it is to be hoped that our friends will read their own back numbers with some care before they offer counsel in another rate-cutting warfare.

Meanwhile our advice is to strive for organization of the trade, since without it nothing which involves co-operation is practicable, and it is only by organization that any approach to unanimity of action can be secured upon this or any other matter. Organization must precede action just as certainly in matters pharmaceutical as in such as are political or military. No army raised and drilled in the face of an approaching enemy can expect to achieve victory, nor can pharmacists hope, by sporadic and unorganized efforts in the event of some special occasion for action, to act with unanimity and power. Use any means for securing organization and for educating men to act in harmony, for developing leaders and accumulating resources. Read and discuss papers or local affairs, play baseball, or dine and dance. Whatever brings men together, and teaches them to act in unison

and under proper guidance, will help them to act promptly and effectively when matters of greater importance demand.

ONE of our readers wishes to know the origin of the use of colored fluids in glass bottles as indicative of a pharmacy. We cannot tell him, without more research than the subject is worth, just exactly how long ago this custom originated, but it was at a time when the great mass of people could not read, and when *signs*, as they are still called, were employed, symbolic of the nature of the business carried on in the shop which displayed them. This was the origin of the boot of the cobbler, the horseshoe of the farrier, the bandaged arm and the spouting blood from its vein of the barber-surgeon, and the barber's pole, with spiral red and white stripes, which has succeeded it. In similar fashion the apothecary exhibited bottles filled with colored fluids representing the nature of his wares, the wine merchant fastened a grapevine over his door, which often was replaced by a branch of a tree when the vine was not available, and gave origin to the saying that "good wine needs no bush," *i.e.*, the man who sells good wine has no need of a sign for the guidance of his customers.

Since the people of this country have always been so far educated as to be able to read, these traditional customs relating to signs are not so much observed as in Europe, where some sort of trade mark was once the common property of nearly every business. Inns and ale-houses were usually known by the name of the sign which they displayed, and the most illiterate could recognize a picture of a "pig and whistle," a "golden eagle," or a "boar's head," when the words could not be read.

College of Pharmacy of the City of New York.—At the time of our going to press the roll of graduates is completed, and the names of the 13 honor men of the graduating class have been published. The competition among the latter for the College prizes has, however, not been completed, hence the result cannot be announced by us in the present issue. The list of graduates is as follows, those on the roll of honor being printed in italics:

G. W. Abrams, H. F. Albert, B. Altheimer, O. F. Bancroft, O. Becker, A. H. Bischof, Ph. Blasser, J. J. Boylan, E. W. Braecklein, T. B. Breen, C. Britten, M. Brody, G. A. Browne, I. G. Bryant, Jr., *L. I. Buck*, W. R. Burkhart, J. E. Butler, D. Cafferata, F. I. Congleton, Jas. J. Cook, J. L. Copelin, E. C. Dennin, A. C. Dohrman, H. R. Du Bois, W. Eichler, *W. E. Fanning*, F. Farrington, R. C. Faulkner, E. F. Fielding, T. G. Fitzpatrick, S. W. Fowler, W. J. Fraser, A. Friedländer, L. Fritsch, G. D. Frueh, H. T. Galpin, A. C. Geist, C. R. George, J. J. Gieser, A. L. Goodman, *H. Groehl*, G. B. Hart, W. A. Hertwig, Th. G. Higgins, E. T. Hitchcock, G. P. Hoffmann, Th. H. Bollinger, O. P. Holm, L. P. Horning, J. L. House, *Ch. Huber*, H. Johannes, W. Johnson, G. B. Jones, E. B. Jorgensen, G. E. Judson, W. H. Kahrs, A. A. Kesseler, C. W. Knape, G. H. Koch, M. Krueger, W. B. Landon, O. P. M. Lieberenz, J. Link, J. H. Luff, E. J. Maring, F. W. Marx, E. W. McKeown, *H. L. McNulty*, J. J. Meytrott, E. J. Milhau, Alf. Miller, J. F. Miller, Jas. H. Monroe, Max Monteser, F. D. Moore, F. E. Nabers, S. W. Nelson, J. C. E. Nielsen, C. P. Oatis, D. R. Oduber, G. H. Paddock, N. D. Phillips, F. H. Plate, J. B. Pyne, Ch. H. Ravich, *G. W. Reed, Jr.*, H. Reiske, A. J. Rice, Jas. C. Ridley, *Ch. B. Riley*, W. Ripton, Orl. B. Salisbury, Jas. L. H. Sayre, W. L. Schaaf, *G. Schaumann*, W. F. Scherer, A. Schleimer, M. J. Schmitt, Ch. H. Sessions, *H. D. Shipman*, Alf. K. Smith, L. A. Spaeth, *E. F. Stone*, H. A. Tice, C. J. F. Timmermann, *F. W. Tobey*, S. B. Townley, *L. C. Trites*, Ch. W. Tuerke, A. M. Van Sickle, A. Ch. Vogt, J. C. Wagner, Helen Marguerite Warner, E. L. Waterman, Ch. Wells, Jas. F. White, S. E. Williams, S. Wygant—total, 119.

INFORMATION WANTED.

OUR *readers will confer a favor by answering any of the following questions and referring to them by number. We will undertake to forward the answers to inquiries when the request for information is accompanied with a directed envelope and postage. The names of the respondents (unless otherwise indicated) will be published in the next issue of the journal.*

QUERIES.

2,525.—**How can Coal Oil be colored Red?**

2,526.—**Paste Poison for Rats and Roaches.** A paste compound of phosphorus, lard, and flour is liable to become dry and to ferment. What can be added to keep it moist and prevent the fermentation?

2,527.—**Ozone.** I would like to know a cheap source of ozone as a bleaching agent for organic material—chiefly cellulose. Cl or SO_2 will not succeed. The *Scientific American* (vol. xxx., No. 26, p. 403) gives three processes for ozonized oxygen, one of which I have tried. A saturated solution of alum at 160° F., and powdered chalk, equal in weight to the alum, added, then H_2SO_4. The gas conducted to bleaching chamber. No ozone could be detected by smell or by KI on filter paper. What literature can I consult? Is there any agent that will accomplish the result?

ANSWERS.

2,516.—**Comp. Fl. Ext. White Pine.** White pine bark, 30 gr.; balm of gilead buds, 4 gr.; sassafras bark, 2 gr.; wild-cherry bark, 30 gr.; spikenard, 4 gr.; bloodroot, 3½ gr.; chloroform, 4 ♏; acetate of morphine, $\frac{3}{16}$ gr. in each fluidounce.

DR. G. B. NICHOLS,
Martin, Mich.

CORRESPONDENCE.

Manufacture of Bromine at Canal Dover, Ohio.

Editor of American Druggist.

DEAR SIR:—I notice in your issue of April 1st, page 105, an article on bromine in the United States. The statistics you have are evidently not correct, as Canal Dover has not manufactured a pound of bromine in the past year and very little in the past three or four years. Your report may be correct as to the ten years from 1877 to 1887 (222,669 pounds), but it is a non-producing territory at present. Michigan produced last year about 60,000 pounds, Pittsburg 110,153 pounds, Kanawha County, this State, 26,032½ pounds, and the Ohio River (or Pomeroy Bend) 125,963 pounds in the pool, of which the Kautz Chemical Co. produced 72,319 pounds (they being the largest producers in the United States), and about 85,000 pounds were produced in this Bend outside the pool. This statement is exact, excepting as to Michigan and anti-pool product here. There is no pool organization now—every tub stands on its own bottom.

* * *

Cocaine Reactions.

PROFESSOR FLÜCKIGER, writing to the *Pharm. Zeitung* regarding recent suggestions for the detection of cocaine, states, regarding the calomel test described by our Paris correspondent, that the reduction of the calomel only takes place when that substance is boiled with free cocaine in the presence of water, and not at all when spirit is used.

The reaction does not take place with cocaine hydrochloride.

Vitali's test is performed by dissolving a little cocaine, or any of its salts, in sulphuric acid (sp gr. 1.843), and adding a piece of potassium iodate the size of a barleycorn, when a green color is produced.

Professor Flückiger has also failed to get this reaction. At the best he has only been able to observe a red color.—*Chem. and Drugg.*

NEWS AND NOTES.

JAPAN.

(From our Native Correspondent.)

DRUG AND CHEMICAL TRADE IN JAPAN.

In the former 1860–1870, the drug and chemical trade in Japan were very small as the most of the people used the drugs; but the said trade are inclined to grow larger than before, as in this period the people of Japan were introduced to the civilization and begin to use the chemicals with the drugs; and I can say this is the first step to use chemicals in the large scales both in medical and industrial purposes; of course, before this time some of the chemicals, such as quinine, santonine, etc., has been introduced by the Hollanders already, but were not so much to mention at here. In the past thirty years, Japan has made a wonderful progress of civilization in any of things, and the drugs and chemicals trade made the same progression in these period, but the extraordinary period was 1880–1890. In the period 1870–1883, there in the drug and chemical market of Japan, the English products occupied the main part of the import, and we could scarcely met with the German products, and it may be in the proportion of 3 of an English and 1 of German products; but from 1883–1890, it becomes in a contrary condition, and still the main parts of the imported goods are chiefly German goods; if we classify the goods according to the countries, 4 parts from German, 2 parts from England, 1 part from France, 1 part from the United States, and other remaining 2 parts from the various countries.

Before 1883, the amounts of the imported drugs and chemicals to Japan are not so much, though it may be $300,000 to $500,000 a year. After 1883 it has been increased remarkably, and in the past four years it may be $1,500,000 to $2,000,000 of an average in a year; and this trades are growing year by year though natives are going to make chemicals and medicinal preparations.

In our drug and chemical market, we usually see the following manufacturer's products: Of German—Scherling's, E. Merck's, Gehe's, Reihidel's, Boehringer & Soehne's, Zimmer's, etc.; of an English—Hopkin William's, Baiss Brother's, Smith's & Co.'s, James Muspratt's, North British Chemical Works, etc.; of an American—Power & Weightman's, Rosengarten's. In the general average the medical chemicals chiefly comes from Germany and an industrial chemicals from the England; some of aforementioned German manufacturers are exporting directly to Japan. Among the natives, some are doing direct import from those factories, but it is a very few to number, and the majority are the buying or importing through the hands of foreigners who engaged upon the trade of the same in Yokohama or Kobe. The foreign firms who treats the drugs and chemicals in Yokohama are: Ahrens & Co., H. C. Marf & Co., Brown & Co., Cocking & Co., China and Japan Trading Co., Rhetz & Co., etc., and any of the foreign firms in Yokohama are willing to take troubles of export or import of the drugs or chemicals, charging 5 per cent commission for the native's request; but the aforementioned houses are well known by the native as a firm to treat drugs and chemicals; and this acquaintance may caused by the past results as in the previous times, most of the imported goods are always bear the trade mark or labels of the abovementioned firms. We often notice that the native products of an America are brought to our market by Germans or English, and never heard of an Americans are engaged in the business of these line in Yokohama except China and Japan Trading Co. and some pharmacist only; while several of an Americans are engaged in the trade of silks and tea in the Oriental market.

Among the American native products or bi-products which may suit for the market of Japan are: Balsams, barks, leaves, oils, tartaric acid, cream of tartar, chloroform, alcohol, glycerine, quinine salts, potassium bromide and iodide (if the price lower than European products and superior quality) and some of pharmaceutical preparations; of the further particulars I shall mention in the other day. Not only those, any kinds of chemicals or drugs will suit, if the Americans can supply the best quality with the lower price than Europeans; but referring the aforementioned goods I have no doubt to receive the entire satisfaction from the Japanese both in price and quality. With regards to the pharmaceutical preparations of the American products; Scott's Emulsion of Cod Liver Oil and Fellow's Phosphate had greatly succeed in Japan, and they have considerable demands in a year. Some of American firms in Yokohama were trying on the Horsford's Acid Phosphate from a few years ago, but they did not succeed as the above two.

To the exporting goods from Japan to American market are camphor, isinglass, menthol crystals, peppermint oil, galls, black oxide of manganese, sulphur, crude antimony, etc., and they are the principal exporting goods of Japan native products, and they can stand in the competition with the products of the other countries.

Tokio, March 31st, 1891.

ENGLAND.

On Friday, March 20th, the proposed "Bill to Amend the Pharmacy Acts" was read for the first time in the House of Commons. It is not too much to say that the trade is just apathetic about it, neither stirring in its favor nor raising much protest against it. And this in spite of a vigorous crusade carried on throughout the country by the President of the Pharmaceutical Society to attempt to stir up enthusiasm in its favor and disarm open opposition. There is some excuse for this state of apathy when the history of attempted legislation during the last twenty years is reviewed. Since 1868 no definite legislation in connection with pharmacy had taken place until last year, when Ireland obtained an amendment act. But on several occasions the council of the Society have attempted a move in this direction and signally failed. In February, 1883, the council introduced a bill, after some five or six years' discussion in committees, which had two principal features: 1st. Making it prohibitory to practise pharmacy unless duly examined and qualified. 2d. Giving the Society power to divide the qualifying examinations and enforce a curriculum. The real author of the new curriculum scheme was none other than Prof. John Attfield, F.R.S., Hon. Mem. A. P. A. and of a dozen American colleges and pharmaceutical associations. Unfortunately such an amount of opposition was raised against the prohibition clauses that the council had to withdraw the bill. In 1884 the Government attempted to produce a Poisons Bill, which was unanimously condemned by the trade, and, after being referred to a select committee, was forgotten in the struggle of a general election. The following year the council tried to obtain the consent of the Privy Council, who possess the veto, to divide the examinations and enforce a curriculum. The prohibition clauses were entirely dropped, but still the Privy Council declined to sanction them and recommended an appeal to Parliament. In 1887 this purely educational measure was introduced and oscillated for several years between the two Houses, making no progress whatever. Whatever feeling was displayed was against it. The present bill returns in a mild way to the original 1883 type—that is to say, it offers to chemists the sole privilege (with doctors and veterinary surgeons) of dispensing medical prescriptions and exemption from jury service in return for the establishment of a curriculum, a divided final examination, and compulsory three years' apprenticeship.

Dr. E. Klein, F.R.S., the distinguished author of "Micro-Organisms and Disease," has just reported to the Government his researches on diphtheria. Two species of bacillus were obtained from infected membranes, which were closely alike when cultivated in the nutrient agar-agar mixture. This agar-agar broth employed by him is made from the so-called Japan isinglass, and is obtained in large quantities from Paris by Messrs. Thos. Christy & Co., of Lime street, London, E. C. To this is added either peptone or extract of beef. He agrees with Löffler that one of these species of bacillus is a pseudo-diphtheria bacillus. Perhaps the most important part is the discovery by Dr. Klein that cats easily contract and transmit diphtheria. Food of diphtheritic patients given to such animals will communicate the disease to them, and they, in turn, may spread it to other cats and also to mankind. Dr. Klein

cites several instances in which animals have conveyed this dreaded affection to children. A cat infected by another known to have suffered from the disease was carefully nursed by four little girls during its illness, and each child caught the infection. These facts explain, to some extent, the transmission of the disease, which is stated to kill annually from 1,000 to 2,000 persons in London alone.

Last Wednesday Surgeon Parke, whose name is inseparably connected with the Stanley expedition, was to have read a paper before the Pharmaceutical Society on the "Arrow Poison of the Pigmies." The distinguished surgeon, however, was not present, and the paper was read by Mr. E. M. Holmes, curator of the Society's museum, who has partially identified the botanical origin of the ingredients. Surgeon Parke is deeply impressed with the virulence of this poisonous compound, for such it appears to be. After considerable difficulty he persuaded a Pigmy woman, following the caravan, to show him the plants used and the method of preparing the poison. Two square inches of a bark were pounded together with two dozen long, green leaves, several feet of the pinkish shoots of a thorny creeper, about a dessertspoonful of the scrapings from a green stem of a shrub, and eight small seeds. These quantities yield about a teacupful of a greenish-colored paste, into which the arrows are thrust. The bark was identified by Mr. Holmes as sassy bark, *Erythrophlœum Guineense* (Don.), which is known to possess a poisonous principle; the green leaves were of *Palisota Barteri* (Benth.), of which little is known; the creeper was probably a species of *Combretum*; the green stem was a species of *Strychnos*, known to be used as an arrow poison, and containing strychnine and brucine; the seeds were similar to those of *Tephrosia Vogelii*, used in Africa as a fish poison, and said to possess narcotic properties.

Saccharin does not appear to have obtained such a prominent position as was anticipated when first discovered. It was amazing to notice what a rush took place to welcome the novelty, and how ingenious were the devices of employing it. Messrs. Allen & Hanbury bought it largely—rumor says by the hundredweight—and announced that all their compressed tablets—tabellæ they call them—would be flavored with it. Another drug firm patented the idea of using a small quantity with the French chalk in pill coating, and so produce a sweet, "pearl" coated pill. These are nearly, if not quite, things of the past. An elixir, adopted by the B. P. C. formulary committee, is occasionally used by medical men to disguise a nauseous drug. It contains 5 per cent of saccharin, with spirit and water. They have also prescribed it in compressed form for sweetening the cup of the diabetic patient. But it remains for a company to advertise it to the public as "a boon to persons of rheumatic and gouty tendencies, and should be adopted by all persons suffering from dyspepsia, indigestion, or diabetes." Their advertisement is also ingenious. It is headed "What is Gout?" "I will tell you," said a Frenchman. "You put your toe in a vise, and then turn the handle until you can bear it no longer—that is rheumatism. Then you give one gr-r-r-eat turn more—that is the gout!" The saccharin is put up in "tabloid" or soluble granulated form and obtainable at grocers' and chemists'. As the name "tabloid" is the registered property of Messrs. Burroughs, Wellcome & Co., it is not too much to assume that they manufacture for this enterprising company.

London Market Report.

MINCING LANE, April 9th, 1891.

Reliable information from Smyrna indicates that the prices in the opium market have hardened, owing to the continuance of dry weather. It is too early yet to estimate the year's crop, but the arrivals to date were 400 baskets short of the number at the same time last year. It is undoubtedly a favorable time for buyers. The sales of bark on Tuesday consisted almost entirely of Indian and Ceylon cinchona, of which more than three-fourths changed hands at a reduction of 10 per cent on former prices, the unit being, as at Amsterdam, ⅞ to 1d.

The drug and chemical markets show little life. Aloes are in fair demand, ipecacuanha is steadily rising, and jalap steady at former rates. Heavy chemicals are steady at same prices, but slightly higher for forward delivery. Mercurials are unaltered, and iodine is fixed at 18c.

The following are current prices:

Acid, carbolic	per lb.,	$0.12	
citric	"	.39	
oxalic	"	.07	
tartaric	"	.30	
Bleaching powd.,	per cwt.,	1.7	
Camphor, crude.	per lb.,	.36	
refined	"	.42–.48	
Cream of tartar..	"	.20	
Cascara	"	.08	
Copper sulphate,	per cwt.,	4.0	
Cinchona	per lb.,	.04–.11	
Cocoa Butter	"	.24	
Ergot, Spanish..	"	.27	
Ipecacuanha	per lb.,	$2.00	
Jalap	"	0.34	
Oils, castor	"	.08–.11	
cottonseed	per cwt.,	5.2	
olive	"	10.1	
linseed	"	5.2	
turpentine	"	7.01	
peppermint, H.G.H., p'r	lb.	3.36	
aniseed, Star..	"	1.56	
Opium, Smyrna	per lb.,	1.85–2.16	
Potash, chlorate	"	.11	
Quinine, Germ.	per oz.,	.20–.21	
Rhubarb	per lb.,	.34–.48	
Shellac, TN.,	"	.18	

HAMILTON, CANADA.

ONE of the greatest pieces of monumental nerve and double-rivetted copper-dome cheek was introduced to the astonished gaze of the brethren in the craft in the action of a resident of an Ontario town in applying to the Legislature for a special act allowing him the privileges of a pharmaceutical chemist in Ontario. The gentleman is a member of a firm of general merchants. A short time since, a chemist and druggist of that place, having removed to Toronto, and wishing to keep the former business in the family, sold the concern to the party first referred to (whom we may call Mr. A., and who is a relative), providing he could register. Now, Mr. A. has for the past decade or more been content to administer codfish, coffee, hats and caps, boots and shoes, wood, coal, and plasterers' materials to the farmers of the surrounding district. Before the Act of '71, Mr. A. (who was about 12 years old then) claimed he was in business entitling him to be registered in accordance with the Act. His idea of a pharmacist is very broad. Paregoric, Paris green, laudanum, castor oil, Pain Killer, and Bristol's Sarsaparilla appear to have been the stock in trade of pharmacists prior to the passing of the Act. Now Mr. A., on the head of this, wishes to affiliate with our august body. But it has been proved conclusively that Mr. A. was not in business at the time he claims to have been; that, even if he were, he has not complied with the provisions of the later Act; and, furthermore, that he is not competent to dispense even the few drugs kept in his establishment, as evidenced by his examination before the Private Bills Committee. He was handed an old examination paper whereon the formula for Emuls Ol. Ricini was written. He made out the oil, gum, and water, but stuck at the M. ft. This was overlooked, however, and he was asked to proceed with the directions. "But they are in Latin," said he, "and doctors nowadays always write them in English." "But supposing you were given directions in Latin?" he was asked. "Oh! we have a book that tells all about that," he replied.

This would all prove amusing, were it not an infringement on one's rights. Mr. B. has obtained the support of a great many of his co-laborers, and by drawing in a few of the rural members (who are willing to support anything, providing their bills relating to village incorporation or building a town hog-pound are supported in return) the amendment may go through. But a circular from the president of the college has drawn the attention of the druggists to the affair, and the door whereby Mr. A. and some twenty or thirty others might slip through will in all probability remain closed, and their ambition to toy with the wily globule and seductive mistura will remain ungratified.

Orders are out for the nomination of candidates for the coming elections in the Ontario College of Pharmacy. Nominations must be made by June 1st. Elections take place on July 1st.

MR. N. A. BOSWORTH, of Stratford, now boasts of one of the handsomest drug stores in Canada. The fittings are of massive oak, handsomely carved. The counter fronts have glass fitted into them, with movable shelving, surmounted by beautiful oak and plate-glass show cases. The walls are very tastily papered, and, while

giving the idea of richness, do not admit a trace of being overdone. The large plate-glass windows in front give excellent light in the daytime, while the arc and incandescent electric and gas lights make the place one blaze of glory when the light of day fails. The fittings are in sections, and so arranged that in case of fire they may all be moved in short notice. In fact, it is one of the most modern of modern drug stores.

MR. FRED. H. YAPP, of Hamilton, has purchased the Coulson stock and moved it to the corner of Cannon and James streets, to a store handsomely fitted with mahogany furniture. He will continue to run the York street business as well.

It is understood that MR. A. RUTHERFORD, of Hamilton, intends opening a branch on James street, North, where he is having a store furnished with all the latest conveniences.

MR. J. A. CLARK, of Hamilton, has given up the premises so long occupied by him on King street, E., and moved still further east. The stand is not so good a one, but it appears that his late landlord intends tearing down the old building and erecting a large warehouse for his own use. So Mr. Clark got out and took the best available stand before some one else got hold of it and left him in the cold.

The large new warehouse on McNabb street, S. Hamilton, being built for Messrs. Archdale, Wilson & Co., is nearly completed, and will be out of the hands of the contractors about the end of the month. When finished it will be the most complete wholesale drug house in Canada. Everything has been arranged with a view to economy in space and time. The offices on the ground floor are fitted up in light varnished wood and white oak. Mahogany overmantels with tiled fireplaces give the rooms a look of luxury unassociated with the older drug houses. The shipping and packing departments are large and well ventilated. The laboratory is to be fitted up with all the latest appliances, and is so arranged that the coarser manufactures will be carried on entirely separate from the finer. A large hydraulic lift has been put in, and runs from the cellar to the roof. Those who wish to get ahead of this enterprising firm will have to be up long before the dew is off the grass.

CHICAGO.

THIS city is passing through another epidemic such as it experienced last winter. Every other man has the "grip," and those who have not are either just coming down with it or getting over it. The death rate is enormous, two hundred deaths having been reported in one day last week. Of course the druggists have their hands full; but, to make matters worse, they, too, are not exempt from the prevailing malady, and are struggling along with short help. One prominent store on the West Side had eighty prescriptions unfilled at 9 o'clock one evening, all of them to be delivered that night. It is unnecessary to state that some of the patients had to wait until next morning for their medicine. This state of affairs is especially noticeable in the wholesale trade, one house having sixteen men away at one time. The wholesalers being crippled, it has been hard to get orders filled promptly. But with the advent of warm and pleasant weather *La Grippe* is disappearing, and lots of overworked prescription clerks are breathing sighs of relief.

An unpleasant incident occurred the other day at the Illinois College of Pharmacy, showing that the color line is drawn even in pharmacy. Among the students entering for admission to the college were three young men from Tennessee, who seemed to think that nothing was quite good enough for them, and who had incurred the dislike of the other students before they had been in the college twenty-four hours. One of the new members this spring is a young colored man, also from Tennessee. He is an unusually bright fellow, and has a preliminary education far above the average student. He is quiet and gentlemanly in his manner, and will make his mark in the world, if he has half a chance. It did not take the three young would-be aristocrats long to find him out. Perhaps they discovered his superiority. At any rate, they reported their "discovery" to the dean of the college, and demanded the colored man's dismissal. Prof. Oldberg of course refused, and the trio turned in their resignations, leaving the college amid the jeers of the other students.

A disastrous fire occurred early Saturday morning, March 14th, totally destroying the wholesale drug house of Humiston, Keeling & Co., 145 Lake street, and the manufacturing establishment of the Wheeler Chemical Works. It started in some unaccountable manner on the third floor among the liquors, and was accompanied by a series of loud explosions which seriously hindered the firemen in their efforts to prevent the spread of the flames. The loss is estimated at $75,000, on which is insurance to the amount of $111,000. The building was owned by C. G. Wheeler, of the Chemical Works. His loss on pharmaceuticals is heavy, and but partially insured. Humiston, Keeling & Co. have leased the building at 200 and 202 Madison street, and are now actively engaged in restoring their business to its former prosperous condition.

Notwithstanding the action of the Retail Druggists' Association in regard to signing the contract sent out by C. I. Hood & Co., Chicago druggists are gradually falling into line, and one by one are depositing their autographs with their wholesale druggist. It is easy to make a speech denouncing manufacturers and advocating boycotting their goods, but the average retailer hates to lose sales, and a few calls from customers for the boycotted goods usually bring him to time.

The trade will be pained to hear of the death of Charles H. Sargent, who died March 11th at his home on Kenwood avenue. He was the only son of E. H. Sargent, and a member of the firm of Sargent & Co. He had been a sufferer from consumption for two or three years, and had travelled considerably in the West and South seeking relief; but when he returned last fall it was generally believed that the end was not far off. He was extremely popular in the circle in which he moved, and leaves a host of friends to mourn his death.

J. H. HOGEY, the South Side druggist, is being sued by Sarah I. Jones for $10,000. She claims to have been poisoned by some essence of peppermint which she bought at his store. Mr. Hogey states that she did not call for or receive peppermint, but that she wanted something to cure cramps in the stomach, and he gave her a dose of Squibb's Diarrhœa Mixture.

A fire which started in the basement of R. E. Rhode's drug store the night of March 18th destroyed $1,000 worth of goods and nearly suffocated a woman living in a flat over the store. Mr. Rhode was sick at the time, and has not been able to get around yet.

C. B. ALLEN died March 23d of pneumonia. He had been sick but a short time, and it was thought that it was merely an attack of *La Grippe*. Mr. Allen was an old and respected druggist. He moved to his present store about two years ago, but he had been, previous to that, for ten years at the corner of Illinois and State streets.

G. W. MAERKLIN, for many years with J. I. Schimek, is about to open a new store at 18th street and Blue Island avenue. Mr. Maerklin was brought up in this neighborhood and is a thorough druggist. There is no reason why he should not succeed.

G. G. SHAUER has returned from his trip through Kentucky and the South. While away he visited the Mammouth Cave, and has some pretty big yarns to tell about what he saw there.

DALE & SEMPILL had another fire the other day. It was caused by rats which had gnawed into a box of matches. Although an alarm was turned in, the blaze was extinguished before any damage had been done.

MR. HENRY ROGERS has returned from Las Vegas Hot Springs. He reports the weather colder down there than we have had here.

The Chicago College of Pharmacy has filed a certificate with the Secretary of State reducing the number of its directors from sixteen to ten.

HERMAN BREVES will shortly open a new store at 336 West 12th street. This building until recently, was oc-

cupied by Kessler & McKay, who are now at 279 South Halsted street.

F. P. HANDTMAN, having sold his store on South Halsted street to his brother Charles, has bought Armbrecht's Pharmacy at 724 West Lake street.

MRS. ELIZABETH VAUPELL, mother of W. R. Vaupell, and sister of Geo. H. Ackerman, died Tuesday evening, March 24th.

THE WHEELER CHEMICAL WORKS, since their fire, have been temporarily located in the Chicago College of Pharmacy building on State street.

CHAS. TRUAX & Co. have increased their capital stock from $100,000 to $200,000.

I. GILES LEWIS has returned from his Southern trip.

THOS. E. DIAMOND is away attending his brother Fred, who is seriously ill.

J. F. COLEMAN & Co. will move into their new store, at Chicago avenue and Market street, about May 1st.

C. H. TRUESDELL has just returned from a two weeks' jaunt through the South.

EMIL OTTO, of 649 West 21st street, sold his store to Otto Caltzau, the Archer avenue pharmacist.

A. S. COWAN has opened a new store at North Clark and Maple streets.

GEO. LENZ & Co. have purchased the pharmacy located at 29th and Wallace streets, formerly owned by A. Kettering.

A son of Prof. Attfield, of England, who is making a tour of the United States, stopped in this city for several days.

DR. SHUGART disposed of his store at Ogden avenue and Harrison street.

The CHICAGO COLLEGE OF PHARMACY held a meeting March 17th, the regular annual meeting under the new constitution. W. K. Forsyth was re-elected to the presidency, and the following were chosen as trustees: Emil A. Zahn, Adolph G. Karpen, Adolph T. Fleischer, Richard C. Frerksen, Charles L. Feldkamp, Andrew Scherer, Hugo W. C. Martin, Edward K. McPherson, Emil Thiele, and Otto J. Hartwig. At the meeting of the new board of trustees Mr. Martin was elected vice-president; Mr. Frerksen, secretary; Mr. Scherer, treasurer; Mr. Zahn, chairman of the lecture committee; and Mr. Karpen, chairman of the business committee.

JOSEPH PIGALL, EDWIN FELTER, and GEORGE K. HERMANN, all graduates of the Chicago College of Pharmacy, recently received their degrees from the Rush Medical College as doctors in medicine.

C. E. RIESS sold his store at 39th and Vincennes avenue to Mr. Muehlmann.

DR. HOLROYD has purchased the store at 18th and Wabash avenue, owned by Max Richter, recently deceased.

D. H. GALLOWAY is now clerk for T. N. Jamieson, 39th and Cottage Grove avenue.

CHRIS. WHITLEY has disposed of the Boulevard Pharmacy, Cottage Grove avenue and Oakwood Boulevard, to Frazier Hurlburt.

BEN. S. COOBAN has purchased the store at 63d and Wright streets, formerly owned by J. M. Rausch.

HISGEN BROS. have opened a new store at 69th and Wentworth avenue.

The firm of KRUEGER & SCHNEIDER has dissolved, Mr. H. Schneider succeeding to the business of the firm.

The title of the drug firm at 6110 State street has been changed from Rogers & Stannard to Stannard & Johnson.

J. H. SISSLER has sold his store at 51st and Wentworth avenue to Mr. Putnam.

The firm of COLDTHURST & LEACH has disposed of the pharmacy at Van Buren and Loomis streets to H. Sherman.

EDWARD RIEGEL has purchased the store at 363 West Chicago avenue, formerly owned by Martha Dunkel.

FRANK C. BUSH has opened a new store at 1124 63d street.

KANSAS CITY.

THE Missouri Board of Pharmacy held its regular quarterly meeting at the Midland Hotel on the 6th and 7th of April, and examined ninety-two applicants for registration, of whom twenty-four were granted certificates, namely: W. P. Bentz, St. Louis; J. L. Bogarth, La Grange; P. Buchert, Kansas City; W. A. Cuffe, Carl Junction; H. W. Caffield, Bonne Terre; L. D. Davidson, St. Joseph; E. Dunlap, Miami; C. A. Ellis, Marysville; M. F. Faulkner, Rolla; E. C. Fair, Versailles; T. H. Fischer, Marshall; C. H. Funk, Stanberry; M. E. Ferguson, Kansas City; G. Graves, Garnett, Kan.; J. Hardacre, Kansas City; J. C. Houser, California; J. L. Gantis, Kansas City; A. C. Kelley, Cameron; S. J. Keiffer, Kansas City; J. C. Maxsom, Kansas City; D. Moffat, Kansas City; J. L. Otterman, Kansas City; E. Thomm, Bonne Terre; and A. Tamm, Sedalia.

The following were registered upon presentation of diplomas, without examination, all being graduates of the Kansas City College of Pharmacy: H. W. Maloney, J. Chandler, J. A. Brinkley, and F. W. Swope.

The Board does not recognize diplomas from departments of pharmacy of State universities.

At the last meeting of the Alumni Association of the Kansas City College of Pharmacy, the following officers were elected: Claude C. Hamilton, president, re-elected; J. R. McGeorge, Council Grove, Kan., first vice-president; Benj. C. Howard, second vice-president; Otto W. Lowe, third vice-president; Chas. W. Neal, secretary, re-elected; F. Leslie Joy, treasurer, re-elected. Executive Board: One year, F. W. Swope, M. J. O'Keefe; two years, H. W. Moloney, F. Leslie Joy; three years, Susie Holzinger, C. W. Neal.

Arrangements were made to have new certificates of membership engraved, and a committee appointed to arrange a series of social meetings for the summer.

The Pharmacy Bill failed to pass after all our hard work, and our boys are disgusted and sore over their defeat. The bill was killed in committee. An effort will be made to bring it before the Senate at the special session next fall. For all that, the K. C. boys are deserving of much credit for making such a *long* bill so near completion, and Dr. Corcoran and others have shown themselves to be lobbyists worthy of any foeman's steel.

At the last meeting of the K. C. Pharm. Assoc., Messrs. C. E. Corcoran, H. Y. Riddle, and J. A. Gallagher were appointed a committee to draft letters of approval of the "coupon plan," and send to Mr. Kline, chairman of the Committee on Proprietary Articles (which meets in New York April 23d), and to the various pharmaceutical journals. The committee is of the opinion that the coupon plan will never be adopted, but are earnestly working in its favor.

The Board of Public Works is having analyses made of water from the different wells of the city. The work is being done by Professors R. R. Hunter and C. C. Hamilton, of the College of Pharmacy.

E. M. VANDERPOOL, Ph.G., formerly with Dr. Jones, 331 and Troost ave., now seeks his fortunes in the drug business at Clinton, Mo. J. F. Chandler, Ph.G., succeeds him at his old stand. Success to both of them!

At 313 Stewart avenue, on Wednesday, April 25th, a very pretty wedding occurred, wherein Mr. Charles F. Smith, the Edgerton Place druggist, and Miss Carrie J. Walker, of Minneapolis, Minn., were united in marriage. The happy couple will take up their future residence in this city. The groom is a prosperous young business man, and the bride is highly spoken of by a host of acquaintances in this city. The best wishes of the AMERICAN DRUGGIST to both of them!

MR. JAMES R. FOX has opened a new drug store at Westville, Mo. His outfit is brand new, and we predict for him success, for there is not a better business man in the State.

MR. A. J. EICHOLTZ, of Minneapolis, Kan., was in the city the 11th. He is attending the State University at Lawrence this session, and will be in our city next winter as a student of the K. C. College of Pharmacy.

MR. MCBRIDE, formerly with Beck & Swearingen, 6th and Walnut Sts., is now with Wirthman Bros., 17th and Grand ave.

J. TANDY RAGLAND takes his place with Beck & Swearingen. Success to both gentlemen in their new positions!

T. F. ALLEN, the enterprising druggist of Liberty, Mo., was the guest of relatives in the city last week.

J. C. LAMS came from Napoleon, Mo., to increase his stock of drugs and druggists' sundries. He reports business good in his city.

C. D. CRAVENS was a guest of the wholesale trade on the 1st. He owns a thriving drug store at Prathersville, Mo.

P. J. HUMBRETE, of Liberal, Mo., has been in our city several days.

MR. HOLMAN, of Lewis & Holman, Ellis, Kan., represented his firm here this week.

C. A. HALLMAN, of Anthony, Kan., was in the city on business the 1st. He is one of the successful druggists of the "Sunflower" State.

C. W. EBERTS has just bought a drug store at Missouri City, Mo., and has been in the metropolis replenishing his stock. Success to him and his new stock!

J. N. BARNES, of Liberty, Mo., visited Kansas City both on business and for pleasure. He claims no relation to "Mr. Barnes of New York."

FRANK PEAKE represented Peake Bros., of Pratt, Kan., among our wholesale brothers last week.

H. G. WELSH, of Peru, Kan., visited the city on the 19th.

E. M. KRAUM, Emporia, Kan., showed his pleasant visage here on the 25th.

Talk about doctors' prescriptions being hard to read! It is said of one of our young physicians that he carelessly left one of his B's upon the piano, when by and by his wife came in and played several measures from it, declaring that, as far as it went, it was equal to "Mad" Wagner's greatest, and wondered where she could get the rest of the piece.

HARVEY W. MALONEY, Ph.G., has opened a new drug store at Shawnee, Kan.

The "Parlor Drug Store" has been removed from Independence and Park avenues to the corner of Independence avenue and Prospect. His many friends will still find Mr. Parker in charge.

MR. G. FRANK has sold his handsome pharmacy, 12th and Campbell streets, to Dr. Herbst, formerly at 14th and Cherry.

One of our suburban druggists has this suggestive sign swung out boldly over his own: "*Where Will You Spend Eternity?*" It is not his fault, however, as Christian Scientists hold their "séances" in the upper story.

MR. SWEARINGEN, of the firm of Swearingen & Williams, Rinehart, Mo., was in the city last week visiting the wholesale trade.

DR. PEIRCE, of Peirce & Brown, Kearney, Mo., paid our city a business visit and increased his stock accordingly.

HARLOW WHITE opens up an entirely new stock of drugs, with new fixtures, at Stewart City, Mo. Of course he will succeed.

MR. GEO. T. LYNN, secretary of Meyer Bros. Drug Company, has been absent on a business trip to St. Louis.

C. L. CRAVENS, local secretary of the Mo. Pharm. Assoc., at Excelsior Springs, has embarked in the banking business.

The pleasant and ever-popular J. B. PAUL is now at Hardisty's, 12th and Cherry.

DR. G. W. FRAKER, Excelsior Springs, Mo., has bought a complete outfit for experiments in analytical chemistry, and will make his own analyses hereafter. And why shouldn't he? He has taken the laboratory course at the University Med. Col.

The drug store at 532 Walnut has been removed to Parsons, Kan.

ST. LOUIS.

AT the graduating exercises of the St. Louis College of Pharmacy, on the 25th of March, diplomas were given to the following-named gentlemen: L. J. Berli, St. Jacob, Ill. (prize for best examination in theoretical pharmacy); E. A. Bernius, Mascoutah, Ill.; F. P. Carey, St. Louis; J. P. Conklin, Santa Fe, N. Mex. (prize for best record and examination in practical chemistry); H. Eswin, St. Louis; E. Feickert, St. Louis; F. C. Garthoffner, Boonville, Mo.; J. E. Gutridge, Calhoun, Mo.; W. P. Hicks, Henderson, Ky.; J. B. Hill, Licking, Mo.; W. P. Heinrich, Mascoutah, Ill.; M. L. Holloway, Middletown, Pa. (alumni gold medal for best examination in all branches; prize for best examination in pharmacognosy; prize for best work in pharmaceutical manipulation); O. B. Ilch, Alton, Ill.; W. F. Kahre, Evansville, Ind.; H. C. Kalbfleisch, Collinsville, Ill.; J. B. Kenney, Larimore, N. Dak.; H. A. Kunz, St. Louis; J. F. Matlock, Kahoka, Mo.; J. A. Matthews, Alhambra, Ill.; E. J. May, Burlington, Ia.; E. A. Medler, Florissant, Mo.; C. W. Nau, Yorktown, Tex.; J. J. Ohning, Evansville, Ind.; G. C. Paulus, St. Louis; R. C. Reilly, St. Louis; J. O. Rowles, Hot Springs, Ark.; E. R. Russell, California, Mo.; R. E. Schlüter, St. Louis (prize for best examination in microscopical technology); F. W. Schmalmaack, St. Louis; H. W. Schulz, Wellsville, Mo.; E. A. Schwenker, St. Louis; A. C. Smith, St. Louis; G. W. Smith, Potosi, Mo.; L. R. A. Suppan, St. Louis; J. H. Temm, St. Louis; G. Waller, Jr., St. Louis; W. Wehrenbrecht, St. Louis; J. A. Weipert, Litchfield, Ill.; J. B. Wolters, Jefferson City, Mo.; W. Zapf, Springfield, Ill.

A regular meeting of the Executive Board of the Alumni Association, St. Louis College of Pharmacy, was held on Tuesday, March 3d. The following new members were elected: Wm. R. Clark, Theodore Ilg, Wm. C. Waldeck, Louis F. Grewe, all of St. Louis. The secretary was instructed to have a copy of the alumni membership certificate filled out, framed, and hung in the college library. It was ordered, on the recommendation of the former president, Dr. Whelpley, to obtain the addresses and occupations of all the members of the association, to be then inserted with the list of members in the next college prospectus.

The president presented the following list of standing committees for the coming year: Publishing Committee, J. C. Falk, M.D., T. A. Buckland, Professor J. M. Good; Papers and Queries, H. M. Whelpley, M.D., Gus. H. J. Andreas, Benj. J. Otto, Fred. Lang, G. H. Scheel, L. E. Frost; Committee on Constitution and By-Laws, C. M. Nicholson, Richard Kring, Theo. A. Klipstein; Committee on Library, Thos. A. Buckland, F. A. Temm, M.D., H. J. Hilby; Memorial Committee, J. W. Tomfohrde, Gustav Brandau, B. J. Ludwig; Committee to Confer with Students, H. M. Whelpley, M.D., J. C. Falk, M.D., T. A. Buckland, Gus. H. J. Andreas, C. M. Nicholson; Delegates to A. P. A., Professor J. M. Good, H. M. Whelpley, M.D., Chas. Gietner, O. A. Wall, M.D., Dr. Enno Sander.

CINCINNATI.

AT the nineteenth annual commencement of the Cincinnati College of Pharmacy, held on March 19th ult., degrees were conferred upon H. Bristle, A. Brüggemann, W. Dennison, A. B. Devers, J. G. Eger, W. A. Eimer, F. H. Freericks, F. Grothe, W. C. Harris, A. S. Hills, L. G. Hofmeyer, T. S. Jordan, A. F. Kirstein, W. F. Knemöller, O. Laist, Jr., R. W. Mitchell, F. J. Renner, R. F. Ruppiler, A. Sander, Jr., A. M. Schwallie, O. Stephan, F. W. Stifel, J. L. Vine, and R. E. Wilson.

KENTUCKY.

THE fourteenth annual meeting of the Kentucky Pharmaceutical Association will convene in this city (Frankfort) Wednesday, May 20th, at 3 P.M.

It is hoped that every pharmacist in the State will make a reasonable sacrifice to attend this meeting, which promises to be full of matters of practical interest.

A full attendance is especially urged, as the advisability of attempting to have an amendment to the pharmacy law passed by the next General Assembly, making the law apply to the whole State, will be thoroughly discussed, and some definite course of action agreed upon.

AMERICAN PHARMACEUTICAL ASSOCIATION.

(SPECIALLY REPORTED BY TELEGRAPH.)

First General Session, held April 27th, 1891.

THE meeting was called to order at 3:30 P.M., PRESIDENT ALFRED B. TAYLOR presiding, and was opened with prayer by REV. DR. SNIVELY.

MR. A. K. FINLAY, the Local Secretary, introduced MAYOR SHAKESPEARE, of New Orleans, who addressed to the Association a few words of welcome. VICE-PRESIDENT A. B. STEVENS briefly responded on behalf of the Association.

PROFESSOR J. P. REMINGTON stated that as the Louisiana Pharmaceutical Association was in session in the same building (Washington Artillery Hall), he thought it would be fitting for the Association to invite the members of that body to participate in the deliberations of the American Pharmaceutical Association, and to freedom of the floor. He moved that a committee be appointed to invite the Louisiana Association to attend the present session, which was carried, and the President appointed as such committee Remington and Dohme.

On the entry of the members of the Louisiana Association, PRESIDENT TAYLOR, addressing the president, Mr. Breslin, welcomed them to the meeting.

PRESIDENT M. T. BRESLIN, in his response, said: "We have been working long to establish a school of pharmacy here, and the deliberations of your Association will guide us and your support be of great assistance in our work."

PRESIDENT'S ADDRESS.

PRESIDENT TAYLOR then delivered his annual address. He congratulated the Association on the choice of its place of meeting, which had opened so auspiciously, the attendance being far greater than had been expected.

Referring to the increase in the number of schools of pharmacy, he observed that it was encouraging to find that out of forty-eight States thirty-five now have enacted laws for the protection of pharmacy, and that State associations have organized in thirty-seven States. The cut-rate problem is still disturbing the minds of the pharmaceutical fraternity. Numerous plans for remedying the evil have been proposed, but as yet none have been entirely satisfactory or entirely practicable. The question will be thoroughly discussed at this meeting, and it is hoped with good effect. In order, however, for any plan to be successful there must be union and harmony (applause); and it is the duty as well as to the interest, not only of our members but of all the pharmacists of the country, to indorse and cordially support any plan which may be approved. The co-operation of every pharmacist in the country is needed. Without such co-operation success cannot be assured. It is the duty of the pharmacist to supply the remedies to effect the therapeutical effects desired by the physician. Has not the time arrived when concert of action between the medical associations and the American Pharmaceutical Association should be made, to have prohibited by the national legislature the allowance of a patent for medicinal preparations? (applause). The vast majority of patent preparations are worthless, and are only brought into notoriety by extensive advertising. Such a restriction as that proposed would not keep from pharmacy the protection of any ingenious process, but would prevent the application of old methods to new accessions.

It will be remembered that the Committee on the Revision of the Pharmacopœia had last year decided that no substance which cannot be produced except under patent processes shall be introduced into the Pharmacopœia (applause). It is believed that only within the last thirty-five years has the United States Patent Office granted patents on medicinal preparations; the ground formerly taken being that such patents were opposed to public policy, and that the Commissioner of Patents was vested by law with the power of determining the usefulness or application of medicines of this character. It is well known that a number of so-called patent medicines are not patent, their ingredients being secret. The only way of dealing with such preparations is by the cultivation of a moral sentiment against their employment. It is for the Association to decide whether such a movement is called for, and whether it will be calculated to advance the character and influence of our honorable calling.

On motion, the recommendations were referred to the Committee on the President's Address, Messrs. Hurty, Trimble, and Fennell.

REPORTS AND COMMUNICATIONS.

SECRETARY MAISCH requested that DR. CURTMAN, of St. Louis, Mo., be allowed further time to prepare his report on prize essays, which was granted.

MR. PARKHILL moved that the Nominating Committee be directed to return the names of two nominees for each office, and that they be voted for by the Association in open session, instead of approving the choice of the Committee as heretofore. Such an arrangement would secure a more direct expression of the wishes of the Association.

MR. ALEXANDER protested against such a change being made, as unnecessary, and as likely to lead to a great waste of time and inevitable dissension.

On being put to a vote, the motion was unanimously voted down.

The minutes of the Council were read by the Secretary, MR. O. K. KENNEDY, and on motion duly approved.

On motion of MR. EBERT, the President appointed a committee of five to report on the time and place of the next annual meeting.

SECRETARY MAISCH suggested that action be taken on the amendment to the by-laws, made at the last annual meeting, providing for a Committee on Transportation.

After some discussion, on motion of MR. HALLBERG, it was agreed that the committee be composed of nine members, located in the principal railroad centres of the country, to secure special rates and facilities for members attending the annual meeting.

PROF. OLDBERG, of Chicago, presented a communication from the World's Congress Auxiliary of the World's Columbian Exhibition, requesting the co-operation of the Association in securing a Congress of Pharmacy during the World's Columbian Exhibition in 1893.

MR. HALLBERG raised a considerable breeze by denouncing the tenor of the communication and its authors in unmeasured terms. Inasmuch as he had started the idea of the American Pharmaceutical Association bringing about such a meeting at the Chicago World's Fair at the last meeting, he thought it was presumptuous in the persons mentioned to take the honor upon themselves and to leave him without recognition. He had labored earnestly, before Chicago secured the fair, to get it located in that city, and had spent time and money in that behalf. He was the originator of the idea of having the International Pharmaceutical Congress meet there. The persons mentioned in the communication had done absolutely nothing. He moved that a committee of five be appointed from the Association to attend to the interests of the proposed scheme, and that none of the persons named be included in it.

MR. WHELPLEY.—A resolution was passed at this morning's session of the Council, recommending the Association, through its President and Secretary, to invite the International Pharmaceutical Association to meet in Chicago in 1893, and that a committee of five be appointed for that purpose.

MR. HALLBERG.—If that is the case I withdraw my motion.

PROF. REMINGTON moved that the Association take no action until the report of the suggested committee was received, which was seconded and carried.

THE PRESIDENT appointed as the committee to arrange the invitation to the International Pharmaceutical Congress Messrs. Remington, Gordon, Whelpley, Hollister, and Goode.

The meeting was then adjourned.

Number present: From Chicago, 40; St. Louis, 15; the East, 175; total number in attendance, 300.

The Second General Session, held April 28th.

The meeting was called to order at 9:45 A.M.

Sixty-three new names were added to the list of active members.

The chairman, C. LEWIS DIEHL, of the Committee on National Formulary, reported that that Committee had found it unnecessary to prepare any further edition, and his report was received.

The Committee on Metric System reported in favor of petitioning Congress to adopt the metric system as a basis for weights and measures, and the committee was authorized to present such memorial to Congress.

MR. ALEXANDER then submitted from the Committee on Nominations the following names for officers: *President*, ALEXANDER K. FINLAY, of New Orleans; *First Vice-President*, GEORGE J. SEABURY, of New York; *Second Vice-President*, WILLARD H. TORBERT, of Dubuque, Iowa; *Third Vice-President*, L. T. DUNNING, of South Dakota; *Permanent Secretary*, J. M. MAISCH, of Philadelphia; *Treasurer*, S. A. D. SHEPPARD, of Boston; *Reporter*, DR. CHARLES RICE, of New York; *Members of Council*, Messrs. GOODE, FENNELL, and CONRAD.

The Secretary cast affirmative ballots for those names, and they were declared elected.

A resolution was passed and a committee appointed to prepare a suitable document to be presented to Mr. C. Lewis Diehl on his retirement, through ill health, from the position as Reporter on the Progress of Pharmacy.

The report of the Publication Committee was received and approved. It was an able report, and besides showing the number of documents, etc., published, stated that the old volumes of the Proceedings were now offered at reduced price to members desiring to complete their sets.

PROFESSOR J. P. REMINGTON emphasized the value that these back numbers offered to druggists, and made a motion that the Committee on Publications be instructed to again reduce the price, so as to enable every druggist to obtain complete sets, which were not so much a help to the Association as to the man who buys them.

The motion was carried unanimously, and includes all the volumes from the date of the formation of the Society, in 1852, to the present day.

The secretary of the Committee on Membership then read his report, showing that at the last annual meeting there were 1,274 members on the roll; that there had been elected since then 95 members; received as delegates, 13; that during the year 61 members had resigned, 26 dropped from the rolls, 9 died, leaving a total membership of 1,286 at present date. There are 23 honorary members, 1 having died during the past year, viz.: Henry B. Brady, F.R.S., of Newcastle-upon-Tyne, England.

The Treasurer's report was read and approved, also the Auditor's report and that of the Examining Committee. The report showed a balance of $4,744.49 on hand; the receipts having amounted to $9,206.39, and the expenditures to $4,461.90, from July 1st, 1890, to March 15th, 1891.

The invested funds in the custody of the Chairman of the Council, J. M. Good, amount to $12,230.88, which are divided into the Ebert fund, $759.82, centennial fund, $1,463.72, and the life membership fund, $10,007.34, all of which are invested in United States bonds and securities.

An amendment was offered in regard to the formation of the Committee on Transportation. Considerable discussion ensued, and a motion to reconsider was then substituted, and it was decided that the selection of this committee be left to Council, as also the selection of the chairman and the filling of vacancies.

PLACE OF MEETING.

The Committee on Time and Place of Meeting, through the Treasurer, Mr. S. A. D. Sheppard, read a letter from Denver, Colorado, asking that that city be selected as the place of the next annual meeting. The committee reported that they would recommend the Crawford House, White Mountains, as the next place of meeting, on the second Monday in September, 1892.

Strong efforts were made to adopt Galveston as the next place of meeting by C. W. Preston, of that city; of Cresson Springs, Pa., by Philip C. Candidus, of Mobile, Ala.; of Nashville, Tenn., by Oscar Oldberg, Chicago; of New York City, by Arthur Bassett, Detroit; of Denver, by Charles M. Ford, of that city. After taking the sense of the meeting upon the various cities mentioned, Cresson Springs, in the Allegheny Mountains, Pa., was selected as the next place of meeting, and the time for meeting to be the second Monday of September, 1892, the Council having power to change the date, if it finds it for the best.

The committee to whom was referred the President's address presented their report, and recommended the various suggestions offered in that address. The session then adjourned to 2:30 P.M.

SECTION ON COMMERCIAL INTERESTS.

The first session was opened at 3 P.M. HENRY CANNING, Chairman, presided.

THE CHAIRMAN delivered a very interesting address dealing exclusively with the matter of rate-cutting, and the means of preventing it. The conference with State Pharmaceutical Associations, he said, which was proposed at the last annual meeting, to ascertain local grievances, had not been carried out yet, owing to the later season at which such organizations met. The result of the representation of the American Pharmaceutical Association at the meeting of the National Wholesale Druggists' Association, and the subsequent conference between the wholesale, retail, and jobbing interests, had resulted in the adoption of the coupon plan for the maintenance of rates. This plan had signally failed, it having been found impossible to protect all sections with it. There were also legal obstructions in the way, as it seemed to be in the character of a Trust, and any similar plan might meet with the same difficulty. If that is the case, the question resolves itself into this: That the manufacturers must protect their own goods from the manufactory to the consumer. One plan in this direction had been evolved —that of the C. I. Hood & Co., which was the only plan adopted during the year and carried through, and was in the nature of a contract between the manufacturer and the retailer. Hood & Co. had invested an enormous amount of money in the scheme.

It had met with antagonism from many quarters, however, because it seemed on the face of it as though it were to establish two prices, an 83-cent price and a dollar price. Hood & Co., however, could not be expected to stand out for a dollar while kindred preparations were to be had for sixty-five cents. It is a foregone conclusion that that article would be boycotted by the cutter. This plan met with objections, and was slashed right and left. Mr. Hood stuck to it as long as he could, however, invested thousands of dollars to carry it out, and finally, because the parties to whom it was intended to be a convenience, by their resolutions and actions throughout the country, said they did not want it, he withdrew and put in no more money. How far Hood's action will militate against any future plan brought forward cannot be determined, but it is a fact that any plan to be successful must be as satisfactory to all in sections where rate-cutting is carried on as in sections where such is not now the case, and must have the solid support of the entire retail trade. Two or three plans are ready to be submitted to the meeting. Mr. Seabury has a plan, J. C. Ayer has one, and the *Pharmaceutical Era* another. It is understood that the manufacturers represented in the National Wholesale Association have agreed that any plan adopted by the American Pharmaceutical Association would be followed by them. But care must be taken that the plan adopted is acceptable to all interests, for a one-sided scheme will fail as heretofore.

An acceptable plan would be to have a strong committee take all the plans presented, and, taking the best features of each, form one which would be likely to succeed, and present their report in time for publication in the Proceedings. He suggested that the American Pharmaceutical Association pay the expenses of the committee, which, after transacting business by correspondence, could meet for a final decision.

MR. ALEXANDER.—It seems to me that the retailers should establish a rate, so as to boycott all those who cut the fixed standard price.

THE CHAIRMAN.—The dealers, it seems, have undergone a revulsion of feeling in Boston, where the market has been changed by the action of C. I. Hood & Co., which has been indorsed. A mass meeting was held, and before it the plan, as formulated by Mr. Hood, was presented, and cutters were told that they should handle goods at a fixed rate or not at all. In Boston the members of the Association were glad to get the standard up to 83⅓. It was a big jump—half way from the cut rate to the dollar.

MR. ALEXANDER said he could see no use in discussing the Hood plan further, as it had been withdrawn.

MR. SHEPPARD read a telegram received from the Massachusetts Pharmaceutical Association, urging the American Pharmaceutical Association to adopt the Hood plan on the dollar basis.

It was moved that the recommendations made by the Chairman in his address be adopted. A motion to approve the recommendations of the Chairman was duly carried.

MR. SEABURY stated that he had been requested by the St. Louis Association and other organizations to represent them. The Association of Manufacturers and Dealers in Proprietary Articles, at its last meeting, passed a resolution in which it agreed to support any practicable plan for the prevention of cutting that is formed by the American Pharmaceutical Association. They further agreed that they would not sell to tradesmen, wholesalers, or cutters who violated any part of a plan so indorsed; and they further suggested that every State and local association indorse this action of the American Pharmaceutical Association, whose organization is founded on State societies.

Considerable discussion followed the submission of this resolution. Messrs. Torbert and Hollister arrayed themselves against Mr. Nattans, who favored the rejection of the resolution. The opposition to the passage of the resolution was finally withdrawn, and Mr. Torbert's position was sustained.

MR. SEABURY spoke at length on rate-cutting. He read a long and interesting though somewhat ancient pamphlet written by himself on the question at issue. He denounced in unmistakable terms those retailers who knowingly sold drugs or preparations to cutters of rates or trades other than that of pharmacy. He favored cohesion among the craft as the means of putting a stop to the cut in the rates, and advocated the tripartite plan—a measure by the prevalence and adoption of which he hoped that the desired end could be realized at the speediest time practicable. Other labor and trade organizations were a unit, and he saw no reason why the druggists did not stick closely to one another. He advocated the passage of such resolutions, or the adoption of such measures, as would best bring to the attention of the Boards of Pharmacy of the country the necessity of doing away with the meddlesome body—the "muslin druggist." They were without license to sell their goods, and he was of opinion that they could be amenable for violations of the laws requiring all dispensing clerks to be licensed. He closed by asking his fellow-members to exert themselves and vie with one another in trying to drive out of the Association the vandal and parasite which is at present a part of the pharmaceutical craft.

MR. ROBINSON, on behalf of the J. C. Ayer Co., presented their plan for the prevention of the cutting of rates. He said that his firm had made it one of the cardinal features never to knowingly furnish goods to any but the druggist, or to trades other than the drug trade.

MR. SEABURY expressed the opinion that all of the plans had their good and bad features, but thought that too many spigot holes had been left. He held that the Ayer plan would not prevent the goods sold to legitimate druggists from falling into the hands of the scalpers, despite the contemplated system of numbering goods sold by the Ayer plan.

On motion of MR. EBERT the plans were ordered received and tabled until a future time.

MR. HOLTZHAUER asked Mr. Robinson whether the agreement was, in his opinion, a good one, and, on being answered in the affirmative, asked again what could be done if a rate cutter bought from a jobber at full retail rates, but received, in lieu of a deduction, a line of goods other than those named in the contract. This, he said, was being done.

MR. ROBINSON was at a loss for an answer, not having considered that side of the question; but, finding the laugh at his expense, said that he was surprised that the gentleman had not, as a duly authorized member of the profession, notified the organization of such a state of affairs. He did not consider that Mr. Holzhauer had acted in good faith, and said as much, though that gentleman said that he had made report on the subject.

MR. NATTANS took Mr. Holzhauer's part in a very warm manner, and during the course of his remarks said that he, for one, did not propose that any employee of a patent firm should be allowed to assail the members of the Association by advising them to turn State's evidence. The speaker then went off at a tangent and spoke of the details of the cut-rate principle. He was called to order abruptly by the Chair, and, in answer to the call to order, said that he considered that the question was open for discussion, and, though he might be treading on some one's toes, he did not wish to do so, except in a general way.

MR. EBERT moved a vote of thanks be tendered the J. C. Ayer Co. for their efforts in behalf of the retailers, which was amended by DR. JAMES to the effect that thanks be given to all who are manifesting this disposition. The motion as amended was seconded and carried.

MR. EBERT said no plan could make an honest man out of a rascal. If certain stores gave away drugs and preparations as an advertising attraction, how could it be prevented? He would ask Mr. Robinson whether his firm was able to trace their goods. Receiving an affirmative reply, he continued that if this could be done, and the wholesaler find to whom he is selling, his plan would be to charge for Ayer's Sarsaparilla $12 a dozen, less 40 per cent, or whatever per cent it is to make this price. Let the wholesale trade charge us $10, less so much per cent, so that a man who is known to be a cutter, who wants to buy goods of the wholesale house, will have to pay $12 a dozen for it. Understanding that a similar plan would be presented in writing, he would not proceed further, but merely recommend it.

MR. HALLBERG presented the following resolution:

Resolved, That a committee of five, consisting of one member each from Boston, New York, Philadelphia, Chicago, and St. Louis, be appointed to formulate a plan for the prevention of cutting of prices in proprietary medicines, and to represent the American Pharmaceutical Association before any properly constituted committee of the Manufacturers' Association and the National Wholesale Druggists' Association. The plan must be based on the following propositions:

1. Full and uniform prices must be maintained.
2. That a plan must not contain any proposition increasing the wholesale prices of goods to retailers.
3. It must not contain any special inconvenience to the retailers.
4. It must be capable of execution, and before final indorsement must stand any test likely to be required of it.
5. But when the plan is finally perfected, and indorsed by the proprietors and wholesale dealers, this committee have power to enforce it through the members of these representative associations.
6. That this section requests the American Pharmaceutical Association to pay the expenses of one meeting of this committee.

After remarking that the discussion on the subject could be kept up forever, MR. TORBERT moved a reference of all the plans to a committee vested with power to examine them, and from them frame a plan suitable to every one's desires, or as near that mark as possible.

Considerable discussion arose on Mr. Hallberg's resolution, and another motion was submitted, whereby it was proposed that the chairman of the section appoint a committee of nine members, who should consider these and all other resolutions presented. It was finally decided that the membership of the committee proposed should

be nine, who would be instructed to report at a future meeting. CHAIRMAN CANNING was named as chairman of the committee, and he appointed the following; Torbert, of Iowa; Sohrbeck, of Illinois; Remington, of Philadelphia; Bassett, of Detroit; Seabury, of New York; Main, of New York; Sheppard, of Boston; and Alexander, of St. Louis. The nominations were approved, and an invitation from the Louisiana Historical Association to visit the Memorial Hall, read by President-elect Finlay, was received, and a vote of thanks returned.

Adjourned to meet at 9 o'clock the next morning.

The Second Session of the Section on Commercial Interests was called to order shortly after 9 o'clock Wednesday morning by MR. HENRY CANNING, the Chairman; MR. W. L. DEWOODY acting as Secretary.

There was fair attendance in the hall at the time, though the crowd was not as great as that during the first meeting of the Convention.

A communication was presented from Messrs. Finlay & Brunswig, the local druggists, in which they denied the right of Battle & Co., of St. Louis, to claim the patent right on a certain preparation made by Finlay & Brunswig.

The communication was the basis of a long discussion, and, after the subject had been thoroughly gone over, it was resolved that the communication be simply received and not published. A communication from the Retail Druggists' Association of Memphis was received and read. It had bearing on the cut-rate question, and was referred to the special committee appointed at the last meeting of the section. A like course was followed with a letter on the same subject from Mr. John B. Thompson, of Madison, Kansas. The committee to prepare a plan for submission to the Manufacturers and Dealers' Association submitted through Mr. Canning, its chairman, the following report on the subject. The section took up each condition of the report separately. Discussion arose in regard to the first condition, as to whether articles other than medicines were to be included in the plan.

MR. SEABURY stated that the manufacturers who had asked the Association to formulate a plan dealt exclusively in medicinal preparations and not other articles, but if manufacturers of other things sold by druggists desired to work under the plan, no possible objection could be made to their doing so.

THE CHAIRMAN read the preamble to the report, concerning the adoption of which a great deal of talk ensued, until MR. SEABURY moved that a limit of three minutes be put to all remarks, which was agreed to. Many members opposed the condition that retailers be bound to selling the particular article called for, some insisting that the druggist was bound, in honor to the manufacturer with whom he agreed, to protect the prices on his goods; to sell what was actually demanded, and nothing else. A motion to adopt the preamble as read was finally adopted. The remaining conditions of the report were then unanimously adopted. The recommendation submitted to the Association of Manufacturers and Dealers in Proprietary Articles, with the view of aiding them in the work of solving the cut-rate problem, the details of the plan being left to the Association, was next taken up, and the remarks of the committee adopted. Criticism was made of the reference in the report of the committee to "ignorant persons" dispensing patent medicines, and the feeling of several members was that it was a slurring expression which could be well omitted. Several members deprecated the indorsement of patent medicines of any kind by the Association, as the pharmaceutical profession, on general principles, were opposed to them. It was suggested that a communication be made to the American Medical Association on the subject, and that the influence of that body against such preparations be requested.

DR. JAMES showed that doctors could not be induced to abstain from employing proprietary articles, many of which are invaluable in disease, such as antipyrin and similar preparations which physicians are continually employing. The committee's report was finally adopted as a whole.

The committee appointed to consider the following resolution adopted by the Association of Manufacturers and Dealers in Proprietary Articles, April 23d, 1891: "*Resolved*, That the Association of Manufacturers and Dealers in Proprietary Articles will support any practicable plan for the prevention of cutting that is indorsed by the American Pharmaceutical Association. They furthermore agree that they will not sell to tradesmen, wholesalers, or cutters who violate any part of a plan so indorsed, and they further suggest that every State and local association indorse the action of the American Pharmaceutical Association"—reported as follows: *Whereas*, The indiscriminate sale of medicines by the ignorant and untrained is an evil of long standing, and public welfare demands medicines should be dispensed solely by experienced persons; *Therefore*, It is the sense of this Association that medicines should be sold only by druggists who have been educated to properly perform their respective duties. We therefore recommend that the proprietary articles be sold hereafter upon the following conditions: Condition 1. Manufacturers and owners of proprietary preparations on the contract plan agree to sell their products to druggists only. 2. Wholesale druggists or distributing agents agree to sell contract goods solely to druggists, excepting in those localities where no druggists are in business. Wholesale druggists are not to supply any dealer on the cut-off list. Further, wholesale druggists agree not to substitute another article in any order presented for any article on the contract plan. 3. Retail druggists to sign an agreement, including all contract or rebate articles, that they will not violate the conditions of said agreement; further agree not to substitute another article for any article requested that is on contract or rebate plan, nor deliver such goods to any dealer on the cut-off list; and it is hereby provided that the names of all druggists who fail to sign the agreement be placed upon the cut-off list. 4. Under no consideration shall any manufacturer, wholesale druggist, or retail druggist, directly or by collusion, supply any proprietary preparation in the contract plan to dealers on the cut-off list. 5. Manufacturers, wholesale druggists, and retail druggists shall refuse to sell commission merchants, brokers, or agents any article on the contract plan, unless such sales are for export, or for purchasers who are removed from domestic competition. 6. Manufacturers and wholesale druggists, or distributers of articles on the contract plan, to agree not to sell such articles to any retailer of said articles who will not agree to sell at full retail prices. 7. Manufacturers of proprietary articles on the contract plan to make their contracts in such a manner as not to materially increase the purchasing price of the retailer. 8. Any wholesale druggist or retail druggist violating his contract shall be placed on the cut-off list, as a penalty of such violation. The principles here presented are submitted to the Association of Manufacturers and Dealers of Proprietary Articles, with the view of aiding them in the work of solving the cut-rate problem, the details of the said plan being left to the judgment of the said Association.

After the adoption of the report as framed by the committee, it was resolved by the Convention that it be the sense of the body that the committee as constituted by the chair remain in power until next year, and that it be vested with the authority of laying the report framed by it before the meeting of the Manufacturers and Dealers' Association at its next session. It was further resolved that the American Pharmaceutical Association pay the expenses of the committee at that time, and the sum of two hundred dollars was appropriated by the Association for that purpose.

MR. WILLIAM H. TORBERT, of Dubuque, was elected Chairman, and MR. ARTHUR BASSETT, of Detroit, Secretary, of the section for the ensuing year.

MESSRS. CHARLES M. FORD, of Denver, CHARLES HOLZHAUER, of Newark, and GEO. L. HECKLER, of Cleveland, were elected to the other places on the committee.

A vote of thanks was tendered to the retiring officers of the section for the able manner in which they handled the affairs of the body in the past year, and short and appropriate remarks were made by the newly elected officers. The section then adjourned, to meet again at the next annual convention of the Association at Cresson Springs.

(Continuation of Report in next issue.)